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World Economic Survey 1992

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The present document is an advance unedited version of *World Economic Survey 1992*. The *Survey* will be issued in due course as a United Nations sales publication.

PREFACE

The year 1992 witnessed events of historic importance for the world economy. World output declined for the first time since the Second World War. Dramatic political events brought about the dissolution of the Soviet Union and catapulted the economies of the successor republics into transition to the market system. They also brought in their wake severe economic disruption and a sharp fall in output and consumption levels. The Persian Gulf war left deep marks on a number of economies. The Maastricht agreement was a milestone to European integration. In South Africa a historic step was taken towards multiracial democracy.

The year was also marked by inaction and disappointments. The developed market economies slumped but caution prevailed and no decisive steps were taken to stimulate growth. The Uruguay Round of multilateral trade negotiations remained stalemated. The prospects of reaping the peace dividend receded into the future.

The developing countries maintained their modest rate of economic growth of recent years. Several among them continued to grow fast. A large number of countries have been making serious efforts at economic reform and in a number of cases these are beginning to show up in a revival of growth. On the other hand, many countries continued to stagnate and face an uphill task. A large part of Africa is in the grip of a severe drought.

The *World Economic Survey, 1992*, examines these and related developments and major issues in the world economy. Chapter I provides an overview of the state of the world economy in 1991 and the key policy issues and presents a short-term economic forecast. Chapter II examines output trends and macroeconomic policies in the various regions and country groups. It analyses, in particular, the policy stance in the developed market economies, the reform efforts in developing countries, and issues of transition to market economies. Chapter III analyses trends in world trade, highlights the continuing tendency towards the formation of trading blocs and briefly discusses issues of trade and environment. Chapter IV analyses recent trends in world savings and investment, examines the question of global savings shortage and discusses recent trends in the net transfer of financial resources among countries. Chapter V analyses recent trends in the oil markets, the potential role of natural gas, and the energy situation of the least developed countries. Chapter VI discusses the conversion of military facilities into civilian use and their links to the peace dividend. Chapter VII examines some of the basic issues related to entrepreneurship as a major agent of economic development and discusses them in the specific context of the developing countries and the economies in transition. The *Survey* ends with an expanded statistical annex of world economic and financial data.

The *Survey* has been prepared in the Development Policy and Analysis Division of the Department of Economic and Social Development with the cooperation of other agencies and offices of the United Nations system, to all of whom we express our appreciation. As in the past, the *Survey* has drawn extensively on the data and analysis of the United Nations Conference on Trade and Development, the United Nations regional commissions, the General Agreement on Tariffs and Trade, the International Monetary Fund, the World Bank and the Organisation for Economic Co-operation and Development.

For the past seven years the *World Economic Survey* has been prepared under the overall guidance of Assistant Secretary-General Gŏran P. Ohlin. This *Survey* is the last produced under his supervision. As he leaves the Department he leaves us with a much improved annual report, thanks to his rigorous intellectual standards and patient efforts. His leadership was highly valued by all those who worked with him.

We hope that the *World Economic Survey, 1992* will be of use to Governments, policy makers, academic institutions and the public and that, most of all, it will assist the Economic and Social Council and the General Assembly in their examination of current and emerging issues in the world economy.

Ji Chaozhu
Under-Secretary-General for
Economic and Social Development

EXPLANATORY NOTES

The following symbols have been used in the tables throughout the report:

Two dots (..) indicate that data are not available or are not separately reported.

A dash (--) indicates that the amount is nil or negligible.

A hyphen (-) indicates that the item is not applicable.

A minus sign (-) indicates a deficit or decrease, except as indicated.

A full stop (.) is used to indicate decimals.

A slash (/) between years indicates a crop year or financial year, for example, 1989/90.

Use of a hyphen (-) between years, for example, 1986-1990, signifies the full period involved, including the beginning and end years.

Reference to "tons" indicates metric tons and to "dollars" ($) United States dollars, unless otherwise stated.

Annual rates of growth or change, unless otherwise stated, refer to annual compound rates. In most cases, the growth rate forecasts for 1991 and 1992 are rounded to the nearest half of a percentage point.

Details and percentages in tables do not necessarily add to totals, because of rounding.

The following abbreviations have been used:

bcm	Billion cubic metres
CEPU	Central European payments union
CIS	Commonwealth of Independent States
CMEA	Council for Mutual Economic Assistance
DAC	Development Assistance Committee of OECD
DESD	Department of Economic and Social Development of the United Nations Secretariat
EBRD	European Bank for Reconstruction and Development
EC	European Community
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ECU	European Currency Unit
EEA	European Economic Area
EFTA	European Free Trade Association
EMS	European Monetary System
EMU	Economic and Monetary Union
FILP	Fiscal Investment and Loan Programme
f.o.b.	Free on board
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product

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GNP	Gross national product
GSP	Generalized System of Preferences
IDA	International Development Association
IDB	Inter-American Development Bank
IFC	International Finance Corporation
ILO	International Labour Organisation
IMF	International Monetary Fund
LIBOR	London interbank offered rate
LNG	Liquefied natural gas
mtoe	Million tons of oil equivalent
NAFTA	North American Free Trade Agreement
NATO	North Atlantic Treaty Organization
NGL	Natural gas liquids
NMP	Net material product
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PHARE	Pologne-Hongrie: Assistance à la restructuration économique
Project LINK	International Research Group of Econometric Model Builders, with Headquarters in the Department of Economic and Social Development of the United Nations Secretariat
PTA	Preferential Trade Area for Eastern and Southern Africa
SADCC	Southern African Development Co-ordination Conference
SDR	Special drawing rights
SII	Structural Impediments Initiative
SIPRI	Stockholm International Peace Research Institute
tcm	Trillion cubic metres
TRIMS	Trade-related investment measures
TRIPS	Trade-related intellectual property rights
UNCTAD	United Nations Conference on Trade and Development
UN/DESD	Department of Economic and Social Development of the United Nations Secretariat
UNEP	United Nations Environment Programme
VAT	Value-added tax

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the United Nations Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The term "country" as used in the text of this report also refers, as appropriate, to territories or areas.

For analytical purposes, the following country classification has been used:

Developed market economies:	North America, southern and western Europe (excluding Cyprus, Malta and Yugoslavia), Australia, Japan, New Zealand, South Africa.
Economies in transition:	Albania, Bulgaria, Czechoslovakia, Hungary, Poland, Romania and the former USSR, comprising the Baltic republics, the Commonwealth of Independent States (CIS) and Georgia.

Developing countries:	Latin America and the Caribbean,[1] Africa (other than South Africa), Asia and the Pacific (excluding Australia, Japan and New Zealand), Cyprus, Malta, Yugoslavia. For some analyses, China has been shown separately.
South and East Asia:	Unless otherwise stated, South Asia, South-East and East Asia, excluding China.
Mediterranean:	Cyprus, Malta, Turkey, Yugoslavia.
West Asia:	Bahrain, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen.
Major developed market economies (or the Group of Seven):	Canada, France, Germany, Italy, Japan, United Kingdom of Great Britain and Northern Ireland, United States of America.

For particular analyses, developing countries have been subdivided into the following groups:

Capital-surplus countries (or surplus energy exporters):	Brunei Darussalam, Iran (Islamic Republic of), Iraq, Kuwait, Libyan Arab Jamahiriya, Qatar, Saudi Arabia, United Arab Emirates.

Deficit countries (or capital-importing countries), subdivided into the following two subgroups:

Other net energy exporters (or deficit energy exporters):	Algeria, Angola, Bahrain, Bolivia, Cameroon, Congo, Ecuador, Egypt, Gabon, Indonesia, Malaysia, Mexico, Nigeria, Oman, Peru, Syrian Arab Republic, Trinidad and Tobago, Tunisia, Venezuela.
Net energy importers:	All other developing countries.
Recent surplus economies:	Hong Kong, Republic of Korea, Singapore, Taiwan Province of China.

Miscellaneous groupings:

Fifteen heavily indebted countries:	Argentina, Bolivia, Brazil, Chile, Colombia, Côte d'Ivoire, Ecuador, Mexico, Morocco, Nigeria, Peru, Philippines, Uruguay, Venezuela, Yugoslavia.
Least developed countries: (47 countries)	Afghanistan, Bangladesh, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Ethiopia, Gambia,

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[1] Unless otherwise stated, Latin America includes the Caribbean.

	Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zaire, Zambia.
Sub-Saharan Africa:	African continent and nearby islands, excluding Nigeria, northern Africa (Algeria, Egypt, Libyan Arab Jamahiriya, Morocco and Tunisia), South Africa.

The designations of country groups in the text and the tables are intended solely for statistical or analytical convenience and do not necessarily express a judgement about the state reached by a particular country or area in the development process.

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THE STATE OF THE WORLD ECONOMY

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Chapter I

THE STATE OF THE WORLD ECONOMY

Economic malaise

The gross global product--the total world output of goods and services--actually dipped in 1991, even if only by one half of 1 per cent (table I.1 and chap. II). This is a rare occurrence, and the main reason was that the economies of eastern Europe and the former Soviet Union plunged even deeper into disruption than in 1990, but growth in the big industrial economies slowed down too and several of them were in recession. World output per capita declined by over 2 per cent in 1991, after virtually stagnating in 1990. African economies, on an average, barely kept up with population growth. Latin American economies seemed to revive from a decade of stagnation, and in Asia growth remained widespread and fast despite the slow-down in world trade.

It was a year of relentless and dramatic political and economic events--the military operation in the Gulf, major policy reforms in many developing countries and political upsets in others, the eruption of new regional conflicts, slides in some financial markets, the failure to complete the Uruguay Round, the ambitious Maastricht agreement on European integration, the apparent breakthrough towards multiracial democracy in South Africa, the *coup d'etat* in Moscow and the formal dissolution of the Soviet Union at the end of the year. Many of these developments were of a positive nature, but others added to the uncertainties already surrounding the principal markets of the world economy.

The relative lack of growth had grave consequences around the world, as economic and social conditions deteriorated. It was becoming increasingly clear that the high unemployment--and the non-employment due to disenchanted withdrawal from the labour force--in industrial countries is directly related to widespread frustration, homelessness, drug trafficking and abuse, crime and ethnic tension. By late 1991 and early 1992, electorates in many industrial countries expressed their discontent with the economic situation.

Table I.1. Growth of the world economy, 1988-1993
(annual percentage change)

	1988	1989	1990	1991[a]	1992[b]	1993[b]
World output	4.4	3.2	1.8	-0.4	1.0	3.0
Developed market economies	4.4	3.3	2.6	◆ 0.9	1.7	3.2
Economies in transition[c]	4.5	2.3	-5.0	◆ -15.9	-12.0	-4.1
Developing countries	4.4	3.3	3.2	3.4	4.5	5.5
World trade (export volume)	8.5	7.2	4.7	3.4	4.5	6.5
Memo item						
Growth of world output per capita	2.7	1.5	–	-2.1	-0.7	1.3

Source: UN/DESD.

[a] Preliminary.

[b] Forecast, based on Project LINK and DESD estimates.

[c] The former Soviet Union and eastern Europe.

◆ After 1990, the former German Democratic Republic is included in Germany.

In developing countries on every continent, poverty, economic chaos and fear of the future promotes fanaticism, terrorism, uncontrollable migration, or civil war, compounding the problem of getting development onto its tracks. Developed countries have not been immune to violent conflict with losses of life and property.

Waiting for growth

But growth and employment have not been the priority objectives of the industrial countries. They are, with differences in nuance, committed to controlling inflation and maintaining stable exchange rates and fiscal conditions. The expectation is that this will provide a sound base for renewed growth and employment which should not be forced but treated with benevolent neglect.

In the meantime, Governments and the business community have waited since early 1991 for a spontaneous recovery from the present recession, repeatedly predicting it and then deferring it for another half-year. The policy stance has not only been passive, but as documented at length in later chapters, Governments have proceeded to cut budgets and payrolls of public service, accentuating the problem rather than remedying it.

Several other things make the present recession different from the earlier ones in the post-war period. One is the unusually heavy indebtedness of households and firms--and of Governments, notably that of the United States of America. High debts and high real long-term interest rates dampen both demand and supply for credit and even drastic cuts in short-term interest rates have little stimulating effect. Purchases of durable consumer goods can be easily deferred and are thus as volatile as investments in productive equipment. So consumer confidence is as sensitive as investor confidence.

Another new feature is the change in the international financial system, which is now ruled by the markets for foreign exchange and short-term international funds. Governments compete to attract funds and retain their own, both short-term and long-term, but they have abdicated most of their policy instruments. Inordinate attention is given to day-to-day fluctations in exchange rates and interest rates.

The prevailing system seems to suffer from a recessionary bias. Financial markets react negatively to any announcement of a policy of economic stimulation that they suspect of being inflationary: the result is likely to be a rise in the interest rates demanded. So Governments anxious for market confidence press for wage repression and zero inflation, trying to make their currencies "strong".

But the social cost of driving down inflation from, say 4 per cent to zero is likely to be very heavy. It is by no means certain that investment will be more stimulated by zero inflation than by an environment of gently rising prices. Measures of inflation are imperfect. At an average of zero, some prices will be declining. The process of contraction tends by itself to discourage rather than encourage investment.

In any case, it is by now widely accepted that on present policies the recovery, which by some accounts is under way, will be weak and make little dent on unemployment.

Shifting preoccupations and political priorities

Governments across the world tend to be caught in much the same financial trap: recession is hurting their revenues and often increasing their spending obligations; the public debt is already large, and tax increases politically difficult. It is the perennial dilemma of public finance but it is accentuated by the recession and real interest rates, which are higher than the rate of growth of the tax base. The message is to cut spending, and proposals for new programmes are rejected out of hand, no matter what the purpose.

But the industrial countries have recently been able to shoulder some very considerable outlays which seemed politically imperative: in support of the military operation against Iraq; in support of defaulting banks, notably the savings and loans institutes in the United States; and in support of the reconstruction of eastern Europe and the former Soviet Union. This has been a pointed reminder that when political priorities are strong enough, considerations of public finance are swept aside.

If unemployment and poverty at home and abroad were given similar priority, there are abundant opportunities for infrastructure construction and maintenance, vocational training and the mobilization of human resources. The hard money doctrine that has come to prevail in the 1990s is so predominant that many believe it is the only way and that the stagflations and the failures of "locomotive policies" in the 1970s and early 1980s show conclusively that it would be inflationary and financially irresponsible to try to put the real economy at the centre of policy.

A more practical objection has been that the upturn is relatively imminent, that any stimulus would take effect so late that it would only fuel inflation. The weakness of the expected recovery robs that argument of much of its strength, and many of the old industrialized countries are in any case in dire need of refurbishing their infrastructure.

All the big industrial countries would like others to shift policies towards growth, but find themselves hamstrung. Recently, the United States, addressing the Group of Seven, eloquently called for concerted action to promote recovery in the world economy. However, outside pressure is usually not very successful in changing policies that Governments think are in their national interest or which have been laboriously negotiated in the national political system. Effective international cooperation for growth and recovery is possible only when all the major countries make it their own objective.

A sea-change in development policy

The economic reform launched by Brazil and India in 1991 was a landmark in the remarkable change in policy orientation that has swept across the continents of Latin America, Africa and Asia in recent years. The pressure of IMF and the World Bank for structural change in institutions and policies contributed, but the wave of liberalization, privatization and fiscal reform that has come about since the mid-1980s reflects a genuine recognition of the need to mobilize and enable the economic talents of the people and to make the State more efficient and less oppressive. Governments had been overwhelmed by the external debt burdens and the reduction of net financial transfers in the first half of the 1980s. But the experience of the successful developers in South-East Asia also attracted increasing attention, and the demise of central planning seemed to make a historic point.

The pendulum may have swayed too far in the direction of market orientation, leading to a neglect of the role and responsibility of the State in development. Both historical and contemporary experience suggest that the State has indispensable functions in defining legal frameworks, providing infrastructure, establishing monetary and financial stability, ensuring education and health, maintaining an acceptable distribution of income and social justice, safeguarding the environment, and providing a vision of the future role of the country in the world economy.

The international debt situation has been defused, although in many countries debt burdens remain serious. A patient approach to commercial debt situations has opened the roads to an untangling of many knots. Relief of official debts is gradually progressing and, to a large extent, debt is no longer perceived as a major threat to international development.

The tendency to see human rights and democracy as essential to development policy has also gained ground among donors, although its application is viewed with considerable hesitation in countries groping for a workable transition to multi-party rule.

The analysis of the various chapters of the *Survey* focuses on the main current and emerging trends and some of the major national and international policy issues. Chapter II examines the global trends in output and policies in the major groups of countries. While there is a great diversity of trends and policies both between and within groups, several features stand out. In the developed market economies, the slide to stagnation and, in some cases, recession and rising unemployment has not been followed by decisive steps on the fiscal or monetary fronts. Policy issues in the countries of eastern Europe and the former Soviet Union were dominated by the problems of transition from a command economy to a market economy. In the developing countries, amidst a great diversity of situations ranging from prolonged stagnation or sharp decline to very high rates of growth, the focus of policy has in many cases shifted to economic liberalization.

Chapter III, while analysing recent trends in international trade, examines the continuing trend towards managed trade and formation of economic blocs, highlights the stalemate in the Uruguay Round of multilateral trade negotiations and describes some of the recent moves towards trade liberalization among the developing countries. It also briefly discusses policy aspects of the relationship between trade and the environment.

A great deal of attention has recently been given to the issue of global shortage of savings, constraining investment and growth. Chapter IV examines recent trends in saving and investment and concludes that world economic growth is expected to be restrained in the medium term, but not by shortage of savings in the ordinary sense. It examines in this context the recent trends and related policy issues of resource transfer and external debt of developing countries.

The availability, demand and price of energy remain critical variables in the world economy. Chapter V examines recent trends in the oil market and the potential role of natural gas. It reviews the energy situation of the least developed countries and highlights their vulnerability to energy crises.

The end of the cold war produced a burst of optimism about the prospects of diversion of resources from military to civilian use, leading to higher economic growth. Reaping the "peace dividend", as these prospects have been called, depends in large part on the ease of conversion of military facilities into civilian use. Chapter VI throws light on key aspects of conversion and the peace dividend in the developed market economies and related policy issues.

One of the consequences of the end of ideological conflict between the East and the West has been a world-wide renewal of interest in the potentialities of entrepreneurship, when released from stifling State control, in fostering economic development. Some of the basic policy issues of entrepreneurial development, including those of the role of the State in fostering it, are discussed in chapter VII, which also examines some of these issues in the specific context of the experience in the developing countries and in the economies in transition.

Short-term outlook for the world economy[1]

Risks and uncertainties

Although many indicators now suggest that recovery is finally under way in the United States and a number of other countries, economic activity has recently been weakening in both Germany and Japan. The recovery is likely to remain weak and could falter in the event of significant adverse shocks.

Political instability in several parts of the world and the great difficulties encountered in the process of transition in eastern Europe and the former Soviet Union obscure the economic prospects in these regions to an exceptional degree.

Great uncertainties also prevail in world markets, notably with regard to the future course of interest rates. The large investment requirements of the European economies in transition and the needs of the Gulf States are leading to an increased world demand for credit, over and above the continuing, though declining, current-account deficits of the United States. Moreover, in some major developed market economies commercial banks, shaken by falling equity prices and large bankruptcies among borrowers, are reluctant to lend to even creditworthy traditional customers. Thus, real interest rates may remain relatively high and credit scarce.

Despite the professed commitment of the major industrial countries to bring the Uruguay Round of trade negotiations to a successful conclusion, there is considerable apprehension that failure of the Round could lead to increased protectionism which would seriously undermine investment and growth prospects in many countries.

Policy assumptions in the forecast

The forecasts for the growth of the world economy in 1992 and 1993 are based on the following assumptions.

Monetary conditions are expected to ease further in a number of developed market economies such as Canada, Japan and the United States in order to counteract recessionary trends or to strengthen recovery. Average annual short-term interest rates in the United States are assumed to fall by about 140 basis points in 1992 and then, in response to the expected economic recovery, to rise by 120 basis points in 1993. In Japan, interest rates are assumed to fall by 130 basis points in 1992 and to change little in 1993. In Germany, on the other hand, interest rates are expected to rise by about 20 basis points in both 1992 and 1993. The operation of the Exchange Rate Mechanism (ERM) of the EC is expected to cause interest rates in most European countries to follow those in Germany.

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[1] This assessment by the United Nations Secretariat is largely based on Project LINK, a global econometric model incorporating over 70 national models.

Interest rate differentials between the United States and major countries in the EC are thus assumed to widen in 1992 and then to fall in 1993. With respect to Japan, little change in interest rate differentials is expected in 1992, but the differential is expected to widen in 1993 in favour of the dollar. Since expected changes in interest rate differentials are important determinants of exchange rate policiesmovements, the deutsche mark is expected to appreciate in 1992 and then to depreciate slightly in 1993. The yen, on the other hand, is expected to change little in 1992, but to depreciate slightly in 1993.

Continued concern over budget deficits means that the stance of fiscal policy in most economies represented in the Organisation for Economic Co-operation and Development (OECD) is expected to remain moderately restrictive or neutral in 1992. However, a modest fiscal stimulus is expected in some countries, notably in Japan. In Canada, where the structural deficit is under control, and in the United Kingdom of Great Britain and Northern Ireland, real government spending is expected to increase more rapidly in 1992 than in 1991. In several small economies, where the level of government spending has fallen, it is expected to decline by a smaller percentage than in 1991. Germany, on the other hand, is expected to maintain the restrictive fiscal stance that began in the middle of 1991 through a temporary income tax increase, a rise in indirect taxes and tight control on expenditure. In 1993, more divergent patterns are expected with somewhat expansionary, or less restrictive, policies among the seven large industrial countries, and a slowing of government spending or a further fiscal tightening in other developed market economies.

In many developing countries that are pursuing stabilization or structural reform programmes, the emphasis is on restraint on government spending, the initial impact of which tends to be deflationary. It is assumed, however, that several Latin American countries will be able to adopt somewhat less restrictive fiscal policies than in the recent past. In Asia, a number of East and South-East Asian developing countries are expected to tighten fiscal and monetary policies, some in response to increasing inflationary pressures and others owing to balance of payments difficulties.

It is assumed that the average dollar price of oil (Saudi Arabian Light) will be $15 per barrel in both 1992 and 1993 (compared with $17.50 in 1991) reflecting considerable shut-in capacity and expected slow growth in world demand. Among non-fuel commodities, prices of food and beverage exports are expected to increase by 2.5 and 2 per cent in 1992 and 1993, respectively. In the case of agricultural and industrial raw materials, a 0.9 per cent increase is expected in 1992 followed by 4.7 per cent in 1993. The prices of manufactured exports are expected to rise by 4.3 and 2.4 per cent in 1992 and 1993, respectively. Thus terms of trade are expected to continue to deteriorate for most exporters of primary commodities in 1992, and improve in 1993.

Forecasts for 1992 and 1993

World output is expected to recover slowly in the course of 1992 with the growth of the gross domestic product (GDP) averaging only about 1 per cent, and to grow by about 3 per cent in 1993 (see table I.1). Any policy changes made in recent months would have little impact on growth in the next half year, though the second half of the year is expected to be better than the first. The projected recovery in 1992-1993, averaging 2 per cent, is much weaker than the 1983-1984 upswing of the world economy, when output grew at an average of 3.7 per cent.

The volume of world trade in 1992 is expected to grow by about 4.5 per cent, up from just over 3 per cent in 1991. Stronger growth is expected for 1993.

Despite a significant relaxation of monetary policy in many countries, economic recovery in the developed market economies is not expected to be evident until the second quarter of 1992, and GDP growth is expected to average somewhat less than 2 per cent for the year as a whole. In 1993, growth is expected to rise to about 3 per cent. Lower interest rates and modest fiscal stimulus in some major countries, especially Japan and the United States, are expected to provide some initial momentum to the recovery. In response to the increase in demand, exports of a number of countries are expected to increase in turn, contributing to overall growth, but the tightened monetary and fiscal policy in Germany will have a restraining impact. Slow growth of import demand in Japan is also expected to have a dampening effect. Thus recovery is likely to be gradual, but to become stronger and more widespread by 1993. (For the relative size of the developed market economies see box I.1.)

In the United States, the recovery is expected to be led by growth in personal consumption and residential construction, modest inventory building, and continued export growth. For the year as a whole, the growth of the gross national product (GNP) is expected to be 1.6 per cent, increasing to 3.5 per cent in 1993 as growth in business fixed investment starts reinforcing the recovery. In Canada, a similar pattern is expected to result in GDP growth of 0.8 per cent in 1992, increasing to 4.5 per cent in 1993.

Aggregate GNP growth in the EC is expected to recover slowly from 0.7 per cent in 1991 to 1.9 per cent in 1992 and to accelerate to 2.6 per cent in 1993. The Maastricht targets on inflation, the fiscal deficit and public debt are expected to limit scope for discretionary fiscal policy and the high interest rate in Germany will restrain rapid growth. After a 2.5 per cent fall in GDP in 1991, positive growth in the United Kingdom is expected to resume in the second quarter of 1992. However, even with interest rates down by more than 400 basis points since 1990 and the introduction of mild fiscal stimulus in late 1991, GDP is only expected to register 1.2 per cent growth in 1992, increasing to 2.5 in 1993. The mild recovery in 1992 is expected to be the result of a modest rebound in consumption expenditure and export growth.

GDP in France is expected to grow by 1.6 per cent in 1992 and by 2.5 per cent in 1993, although business investment is expected to remain flat. Household income and personal consumption are expected to benefit from a slightly more expansionary fiscal stance and a very sharp recovery of agricultural incomes after a bad 1991. In Italy 1992 is expected to be another year of weak growth, averaging 1 per cent. Consumption growth is expected to stay at slightly more than 2 per cent in 1992 while private investment will remain stagnant. No stimulus from public spending can be expected as the budget deficit is higher than the norms of the Maastricht agreement. In 1993, GDP growth is forecast to accelerate to 2.1 per cent, with stimulus from both stronger domestic demand and faster export growth.

GDP growth in western Germany is expected to average only 1.7 per cent in 1992. Consumption is likely to rise only slightly owing to higher tax rates. In eastern Germany high investment levels as well as growth in consumption and exports are likely to yield a positive GDP growth rate of about 9 per cent in 1992. In 1993 a moderate acceleration of growth of private consumption and exports is expected to raise GDP growth in western

Box I.1. How large is the world economy?

It might seem the most simple and straightforward question to ask, but anyone trying to measure the size of the world economy is quickly caught up in many inherent complexities. All economic activity--whether farming in the United Republic of Tanzania, doctors' services in Sri Lanka, oil production in Venezuela, computer programming in Hungary, or the writing of a novel in Canada--has to be valued in a common way and expressed in a common unit of measurement. Even if all the world's goods and services were provided in markets and could thus be valued at market prices, the valuation of total production would change from year to year because prices change, not least the prices of the different currencies in which each nation measures its production. Meaningful comparisons over time thus require fixing prices in one year. No one year is the single correct one to fix, nor is there a single best way to measure and to average individual prices. But whatever approach is taken to calculating the price index relative to a base year, as that year recedes in time its prices become less and less relevant and a new "base year" is needed.

For much of the 1980s, the *World Economic Survey* used 1980 as the base year for its aggregations of world output. Sufficient data are not yet at hand to make 1990 a new base year, but it was feared that increasing distortions would be introduced into estimates of global output if the old base year were retained. Thus, the *Survey* has shifted its base year to 1988.

The value of world output in 1980 valued in 1980 prices was under $13 trillion. The same output valued in 1988 prices exceeded $15 trillion. While there had been a certain amount of inflation, relative price changes also took place that had important consequences. Thus, the share of the developed market economies in world output, measured in 1988 prices, was 71 per cent compared to 61 per cent when valued in 1980 prices (see figure).

Both fuel and non-fuel commodity prices reached a peak in 1980 from which they receded sharply through much of the decade, especially measured against the prices of manufactured goods. This affected especially the oil exporting developing countries and the former Soviet Union, which was also a major oil exporter. In addition, most developing countries and economies in transition underwent substantial currency devaluations, which more than compensated for inflation differentials with the major currency countries. Declining terms of trade and sharply curtailed international financing made it necessary to encourage exports and discourage imports by devaluing the domestic currency in real terms.

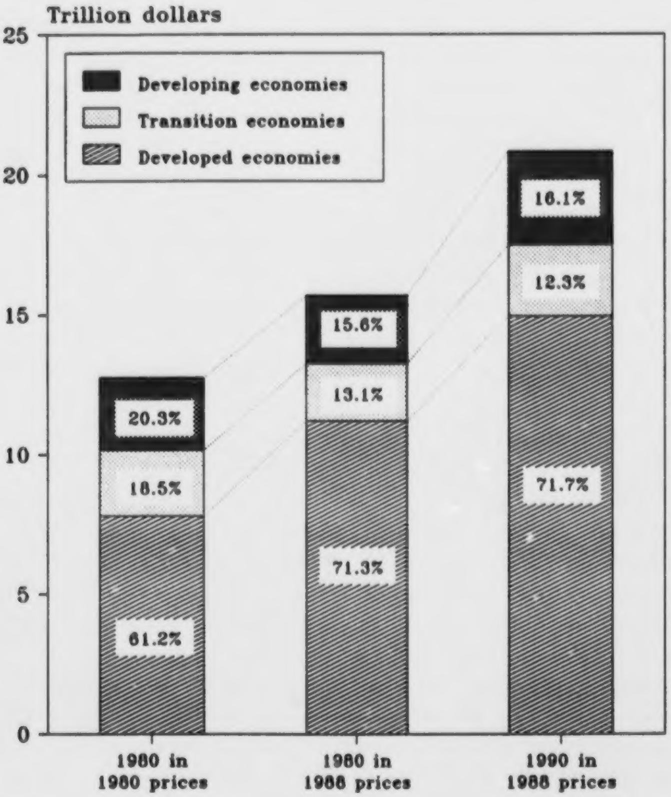
In 1990, the world economy produced almost $21 trillion worth of output, measured in 1988 prices. Since there was very little change in world output last year, this was roughly the total value of global GDP in 1991 as well.

The developing countries had the most rapid growth in the decade, although it averaged only slightly over 3 per cent a year. Measured in 1988 prices, their share of the total rose half a percentage point to 16 per cent by 1990. But these countries also had the most rapid population growth; so on a per capita basis, their growth rate was the slowest. The terms-of-trade decline, due to price changes already noted, meant that their *income* per capita at the end of the decade was lower than at the beginning although their *output* per capita was higher.

The transition economies had the slowest growth, averaging only slightly above 2 per cent a year. But growth averaged 3 per cent a year up to 1989 and was followed by a decline of almost 5 per cent in 1990. Their share of world output, measured in 1988 prices, declined slightly, from 13 per cent to 12 per cent over the decade, but is expected to drop to about 9½ per cent this year as a result of the collapse that began in 1990.

The developed market economies maintained their share of world output at almost 72 per cent throughout the decade. They had the slowest rate of population growth among the major country groupings (0.6 per cent a year) and the most rapid growth of GDP per capita, over 2 per cent annually, twice the rate of increase in the developing countries and 50 per cent more than in the economies in transition (for more detailed comparisons, see statistical annex).

World output in 1980 and 1990



Source: UN/DESD.

Germany to 2.4 per cent while in eastern Germany GDP growth is likely to remain the same as in 1992. The country as a whole is expected to achieve a GDP growth of about 2.5 per cent in 1992 and 3.2 per cent in 1993.

In Japan, GNP growth is expected to slow to 1.9 per cent in 1992, but a moderate recovery is expected to begin in the second half of the year. For 1993, GNP growth is projected at 3.9 per cent.

In 1992 inflationary pressures are likely to ease further in North America, but to increase slightly in Europe. Consumer prices in the developed market economies as a whole are expected to increase by 3.5 per cent, slightly lower than in 1991. In North America, wage restraint, low raw materials prices, and falling oil prices are expected to contribute to moderating inflation. Cost pressures in Germany and elsewhere in Europe are expected to be reflected in a slight increase in inflation, to 4 per cent. In 1993, inflation rates are expected to converge and to be only slightly higher than in 1992, with economic recovery leading to a slight acceleration of inflation in North America, and tight macroeconomic policies leading to some reduction in the EC. Reflecting the usual lagged response, the average unemployment rate in 1992 is expected to increase to 7.8 per cent for the developed market economies a a whole, with the increases concentrated in Australia, Canada, Finland, Sweden, the United Kingdom, and the United States. Unemployment rates are expected to begin to fall in 1993, but only by less than one half of 1 per cent, since the recovery is not expected to be vigorous and since businesses are likely to be cautious in adding to payrolls.

In South and East Asia, GDP growth is expected to be about 5.5 per cent in 1992, about the same as in 1990, and to rise to 6.5 per cent in 1993. A rebound in domestic demand following a period of fiscal restraint is expected in India. Rapid growth is expected to be maintained among the newly industrializing economies (NIEs). For most of these economies, double-digit growth in exports is expected in 1992 and 1993 with intraregional trade, especially with China, continuing to grow faster than exports to Europe and North America. In several NIE's, especially the Republic of Korea and Singapore, labour shortages and rising wages have caused a partial shift in the locus of growth to domestic demand resulting in inflationary pressures and a need for fiscal restraint, which is expected to mean somewhat lower rates of GDP growth in the medium term.

In China, the continuation of less restrictive monetary policies coupled with the easing of external retrictions on imports of machinery and equipment is expected to maintain investment at a high level, and growth is forecast at around 7 per cent in 1992, about the same as in 1991. Economic reforms are expected to gather momentum, with an emphasis on price reform and autonomy for State enterprises. Political commitment to reform is expected to be strengthened when the quinquennial Communist Party Conference meets toward the end of 1992.

In West Asia, GDP growth is expected to be about 4 per cent in 1992, which could rise significantly in 1993 owing to reconstruction in the aftermath of the Gulf war and increases in oil output, with the gradual restoration of oil production and refining capacity.

In a number of the large and medium-sized countries in Latin America, growth is expected to improve, raising GDP growth for the region as a whole to around 3 per cent in 1992 and around 4 per cent in 1993. Argentina, Chile and Mexico are likely to grow in the range of 4 to 7 per cent in 1992. Investment growth is expected to be high in all three, but consumption growth is also expected to be high in Argentina since an abrupt decline in inflation is expected to increase real wages substantially. Much of the investment expected in Maxico is in anticipation of the successful completion of the North American Free Trade

Agreement. Brazil, the largest economy of the region, is expected to grow by 1 to 2 per cent but there is considerable uncertainty about its prospects.

Aggregate GDP growth in Africa is projected to pick up slightly in 1992 to around 3.5 per cent, but with sub-Saharan Africa growing by only around 2 per cent. The recent droughts may have dimmed the prospects further. Low prices for tropical beverages, metals and oil are expected to depress export earnings in 1992.

The efforts of the countries of eastern Europe and the former Soviet Union republics to dismantle their command economies and to transform them into market economies were accompanied by a further contraction of output in 1991 (see chapter II). In 1992, output in these economies is expected to contract by 12 per cent, after a 16 per cent decline in 1991. Output is likely to fall further in 1993, but at a slower rate. The successor States of the former Soviet Union are expected to experience a decline in GDP of about 15 per cent in 1992 following a contraction of 17 per cent in 1991. In the five countries of eastern Europe (Bulgaria, Czechoslovakia, Hungary, Poland and Romania) output is expected to decline by about 3 per cent in 1992, after a 13 per cent fall in 1991.

Growth prospects in these countries will depend largely on their success in restoring fiscal balance, controlling inflation, building up financial institutions, and privatization. In Czechoslovakia, reducing inflation to a range of 10 to 14 per cent is the main economic policy target, followed by exchange rate stability and current account balance. In Hungary, though bringing down inflation to the level of 20-25 per cent is high on the agenda, the main priority is to achieve a current account surplus, enabling the country to further increase international reserves and to slightly decrease the level of net foreign indebtedness. In other countries, a deceleration of inflation and restoring fiscal balance will continue to be major policy goals. Yet, whatever the economic policy targets adopted, the major issues in 1992 will be credibility and business confidence, since their maintenance is expected to attract foreign direct investment and encourage domestic private saving and investment, which are regarded as the key elements for successful economic transformation and macroeconomic stabilization.

The course of economic transition will be critically determined by political factors in most countries. Czechoslovakia is confronting secessionist pressures. Both Czechoslovakia and Romania have scheduled elections in 1992, the results of which may have important repercussions on economic policies. The outcome of the recent elections in Poland has shown the fragility of economic policies which do not enjoy wide public support. Rising unemployment and the inevitable streamlining of social security systems will further increase the political pressure on policy makers.

Conclusion: the primacy of growth

The expectations of recovery in late 1992 and 1993 are not entirely confident: the downside risks are great in the present climate of pervasive uncertainty. But even on the assumption of a sustained acceleration in the OECD economies, it is expected to be too weak to make a dent in unemployment, and growth in the 1990s may be inadequate to resolve the many and varied problems around the world.

Without a more dynamic world economy, the current liberalization efforts of developing countries will not bear fruit. Outward oriented development strategies largely rely on buoyant international trade and, hence, an expanding world economy, to achieve their objectives.

There is today much concern about the lack of resources for such urgent needs as the reconstruction of the east, a concerted attack on poverty and human development in the poorest countries, and environmental investments of all kinds. If the growth of world output returns to the levels of the 1980s, total output would grow by about one trillion dollars a year. There is, in fact, no other way to resolve the economic and political crises multiplying in the world community than to give priority to the restoration of growth.

The "peace dividend" has vanished from sight, frittered away in budgetary squabbles in the west and engulfed by economic chaos in the former Soviet Union. In conditions of stagnant and sluggish demand, the task of conversion--of shifting resources from military to civilian uses--appears to be more of a burden than a boon. In a buoyant economy jobs are abundant and skills valued. Only in such conditions can the benefits of the peace dividend be reaped.

In the long run only productivity increases can ensure meaningful growth and development, but the first need is to reduce the waste of human lives in poverty and unemployment, which is the scourge of the world and at the root of its most acute problems. Restoring a more vigorous and dynamic climate of growth in the world economy must be the principal objective of international economic cooperation in the years ahead.

Chapter II

TRENDS IN GLOBAL OUTPUT AND POLICIES

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Chapter II

TRENDS IN GLOBAL OUTPUT AND POLICIES

World output declined in 1991 for the first time since the Second World War and is expected to recover only modestly in 1992 (see table II.1). It was the world's first global recession of the post-war era.

The economic decline of 1991 was pervasive. In the developed market economies, which account for over 70 per cent of world output, growth fell from 2.6 per cent in 1990 to just under 1 per cent in 1991. Several countries slid into outright recession. In many of them, unemployment rose to its highest level since the early 1980s. Although inflationary pressures subsided substantially, Governments and central banks responded slowly and tentatively, or not at all, to the recession. Their policies were premised on the assumption of a spontaneous upturn, and the unexpected prolongation of the recession created a dilemma. A recovery may begin in 1992 but it is generally expected to be subdued and not of a nature that would give a push to the world economy.

In eastern Europe and the former Soviet Union, output plummeted by around 16 per cent in 1991, after a 5 per cent fall in 1990. The difficulties of enacting a transition of these economies to a market system are becoming apparent to all. The people in the transition economies will pass through yet another very difficult year in 1992.

The developing countries as a whole grew slowly in 1991, as they have for several years, mainly following the same pattern of strong growth in eastern Asia and virtually no change in per capita incomes in Africa. Latin America, however, showed the first signs of emerging from its decade-long stagnation. Nevertheless, in almost half the developing countries, per capita output fell or stagnated. In a small number of countries, albeit accounting for almost half the people living in developing countries, per capita output grew significantly.

Developed market economies: recession and response

In early 1991, three of the seven major industrial economies were in outright recession - Canada, the United Kingdom and the United States - while production surged in the western part of Germany and in Japan (see table II.2). By the end of the year, Germany and Japan were in recession, and the recovery elsewhere was weak and fragile. For 1991 as a whole, the developed market economies grew by less than 1 per cent, the slowest rate since the 1982 recession (see table A.2). The policy response, analysed below, was tentative and weak.

Three million people were added to the unemployment rolls in the developed market economies last year. In December, the unemployment rate in the United States reached 7 per cent, measured on an internationally standardized basis, about a percentage point higher than it had been a year before. In Canada and the United Kingdom unemployment was above 10 per cent of the labour force at year-end and in France and Italy, it was almost as high. Only in the western part of Germany and in Japan, among the seven major

Table II.1. Growth of gross domestic product (GDP) and population by region, 1981-1992

	Growth of GDP (annual percentage change)						Memo items: 1991 indicators		
	1981-1987	1988	1989	1990	1991[a]	1992[b]	Growth of population (percentage change)	Population (millions)	GDP (billions of 1988 dollars)
World	2.7	4.4	3.2	1.8	-0.4	1.0	1.7	5 315	20 868
Developed market economies of which:	2.5	4.4	3.3	2.6	♦ 0.9	1.7	0.5	833	15 177
United States	2.7	3.9	2.5	1.0	-0.7	1.6	0.7	252	5 038
European Community	1.8	4.0	3.5	2.9	♦ 0.7	1.8	0.2	342	5 181
Japan	3.7	6.3	4.7	5.7	4.5	1.9	0.5	124	3 350
Economies in transition[c]	2.9	4.5	2.3	-5.0	♦-15.9	-12.0	0.4	387	2 212
Developing countries	2.9	4.4	3.3	3.2	3.4	4.5	2.1	4 095	3 479
Latin America and the Caribbean	1.5	0.7	1.1	-0.1	2.6	3.0	2.1	451	895
Africa	1.8	2.3	2.7	3.1	3.1	3.5	3.2	591	340
West Asia	-2.0	-0.5	2.3	1.6	--	4.0	3.0	130	446
South and East Asia	5.5	8.5	6.1	6.3	5.4	5.5	2.2	1 685	1 157
China	9.7	10.9	3.6	5.2	7.0	7.0	1.5	1 156	508
Mediterranean	3.0	1.3	1.0	1.1	-7.0	2.5	1.6	82	133

Source: UN/DESD. Data on population are those published by the Department in World Population Prospects, 1990 (United Nations publication, Sales No. E.91.XIII.4).

[a] Preliminary.

[b] Forecast, based on project LINK and DESD estimates. For the group of developing countries, estimates are rounded to the nearest half percentage point.

[c] The former Soviet Union and eastern Europe.

♦ After 1990, the former German Democratic Republic is included in Germany.

Table II.2. Output, unemployment and inflation in seven major industrial economies, 1990-1991

	Quarter								Year	
	1990				1991					
	I	II	III	IV	I	II	III	IV[a]	1990	1991[a]
					Growth of gross domestic product[b]					
Canada	2.1	-0.7	-1.0	-4.7	-4.8	5.8	1.0	-0.8	0.5	-1.1
France	4.6	-0.3	3.5	-0.3	0.3	2.8	3.1	--	2.8	1.0
Germany[c]	10.1	1.3	7.5	2.3	10.1	-2.4	-1.9	-1.4	4.5	3.1
Italy	3.5	-1.7	2.8	0.3	1.4	1.0	0.2	1.2	2.0	1.0
Japan[c]	6.4	5.6	4.5	2.5	8.4	2.8	1.8	-0.2	5.7	4.5
United Kingdom	4.2	3.8	-5.3	-4.0	-2.7	-2.4	0.4	-1.4	1.1	-2.5
United States	1.7	1.6	0.2	-3.9	-2.5	1.4	1.8	0.4	1.0	-0.7
Total	4.3	2.3	2.1	-1.1	1.9	1.4	1.3	-0.1	2.7	1.1
					Unemployment[d]					
Canada	7.5	7.4	8.1	9.1	10.1	10.3	10.3	10.3	8.1	10.2
France	9.0	9.0	8.9	8.9	9.0	9.2	9.5	9.7	8.9	9.4
Germany	5.3	5.2	5.1	4.7	4.3	4.3	4.4	4.3	4.9	4.3
Italy	10.1	9.7	9.8	9.8	9.9	10.0	9.6	9.9	10.3	9.9
Japan	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.1
United Kingdom	6.7	6.7	6.8	7.3	8.2	9.2	9.9	10.3	6.9	9.4
United States	5.2	5.2	5.5	5.8	6.4	6.7	6.7	6.9	5.4	6.6
Total	5.5	5.5	5.6	5.8	6.1	6.3	6.4	6.5	5.6	6.4
					Consumer price increases[e]					
Canada	5.4	4.6	4.2	5.0	6.4	6.2	5.7	4.1	4.8	5.6
France	3.3	3.1	3.5	3.6	3.5	3.2	3.0	2.9	3.4	3.1
Germany	2.7	2.3	2.7	3.1	2.7	3.1	4.2	4.0	2.7	3.5
Italy	6.4	6.0	6.5	6.7	6.4	6.7	6.4	6.1	6.4	6.4
Japan	3.5	2.5	2.6	3.6	3.7	3.4	3.2	2.8	3.1	3.3
United Kingdom	7.8	9.6	10.4	9.9	8.6	6.0	4.8	4.2	9.5	5.9
United States	5.2	4.6	5.5	6.2	5.3	4.8	3.8	3.0	5.4	4.3
Total	4.8	4.4	4.9	5.5	5.0	4.6	4.0	3.4	4.8	4.2

Source: UN/DESD, based on data of IMF, OECD and national authorities (n.b., Germany is western Germany only in this table).

[a] Partly estimated.

[b] Percentage change in seasonally adjusted data from preceding quarter, expressed at annual rate (total is weighted average with weights being 1990 GDP, valued at 1988 prices and exchange rates).

[c] Gross national product.

[d] Percentage of total labour force; seasonally adjusted data as standardized by OECD.

[e] Percentage change in average consumer price index in quarter relative to same quarter of preceding year (total is weighted average with weights being annual consumption valued in 1988 prices and exchange rates).

economies, were unemployment rates still at moderate or low levels relative to industrial country averages in recent years (see table A.6).

Several of the smaller developed market economies also were in recession last year, including Australia, Finland, New Zealand, South Africa and Sweden. Unemployment rose during the year by 2 percentage points in Australia and New Zealand, and about 6 percentage points in Finland. By December it exceeded 10 per cent in all three countries. In Finland, the crisis of the Soviet economy, as well as slow growth in other major export markets, made for great difficulties. Unemployment also rose in countries with chronic unemployment problems, such as Ireland, where a 2 percentage point increase pushed the rate to 16 per cent.

The recession came after the longest, though not the strongest expansion in post-war history. Renewed inflationary concerns in the late 1980s had led to monetary stringency that weakened several of the developed market economies by the end of 1990.[1] Although inflation was brought down in 1991 (see table A.7), some countries were pushed into recession. For others, the *coup de grâce* was a drop in consumer and business sentiment associated with the crisis situation between Iraq and Kuwait that began in August 1990.

After the war in the Middle East ended in February 1991, consumer confidence rebounded in several industrial countries (see figure II.1) and the spending slide eased. Even so, consumers remained cautious, especially in Canada, France, Italy and the United States. In France, for example, 16 per cent more respondents expected their situation to deteriorate rather than to improve in March, which was the most "optimistic" month of last year. Output began to recover, notably in Canada, France and the United States; but the recovery never gathered steam (see table II.2).

Why does the United States grow so slowly?

Since the United States accounts for more than a third of the output produced in the developed market economies, it is of special concern when the economy of that country becomes mired in recession. A year ago it was thought that the United States downturn had ended and that the dip in output had been rather short and mild. But since late summer and through early 1992 output has been almost stagnant. Moreover, from the second quarter of 1989 until the recession began at the end of 1990, real GDP grew at an annual rate of only 1.25 per cent. If the crisis in the Persian Gulf provoked the United States recession, the United States economy may have returned to the pre-recessionary, nearly stagnant growth path. The trend may continue until structural imbalances stemming from the 1980s are corrected.

One such imbalance is the high level of debt of households and enterprises. After a decade of stability, the debt/equity ratio of non-financial corporations rose from about 50 per cent in the early 1980s to 82 per cent by 1989. The ratio of consumer and mortgage

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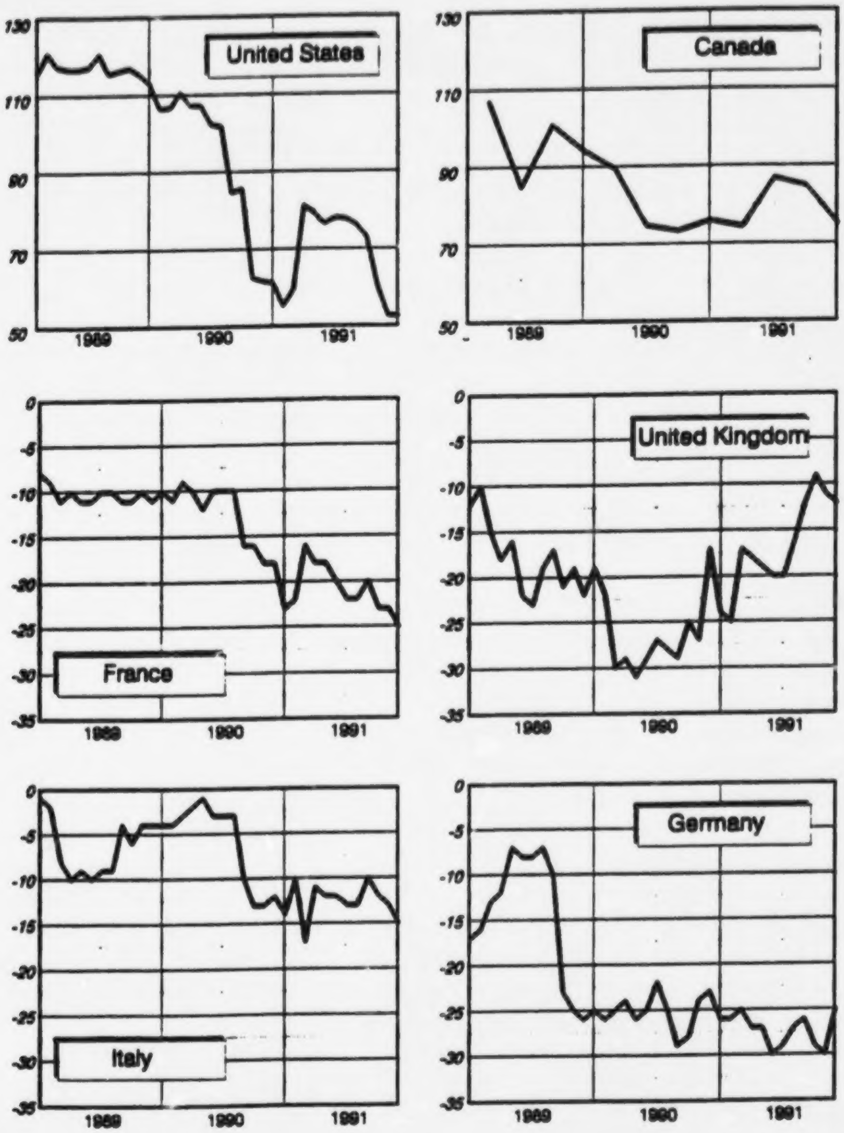
[1] Sources of the recession were reviewed in *World Economic Survey, 1991* (United Nations publication, Sales No. E.91.II.C.1), pp. 10-18.

Figure II.1. Consumer confidence in six major economies, 1989-1991[a]



Source: Canada: Conference Board of Canada; United States: The Conference Board; Germany, France, Italy and United Kingdom: *European Economy*.

[a] For Canada and United States, measure is an index (1961 = 100, 1982 = 100 respectively); for others, measure shows percentage of respondents to a survey who expect an improvement minus percentage who expect a deterioration.

debt to disposable income rose from about 70 per cent in the early 1980s to nearly 95 per cent by 1990. In the light of a disappointing outlook for jobs or sales growth, coupled with widely publicized difficulties of some of the most prominent United States corporations, it became prudent - if not necessary - to use additional cash flow to reduce debt. Thus, neither consumer nor investment spending grew last year. Personal consumption expenditures in constant dollars rose slightly in the second and third quarters (1.4 and 2.3 per cent, at annual rates), but then fell in the last quarter; non-residential fixed investment continued to drop throughout the year.[2] If it is a balance-sheet restructuring that is taking place, the process may well take longer than the inventory adjustments of a few quarters in traditional business cycles.

The one bright spot in the second half of 1991 in the United States economy was the 10 per cent rise in residential construction over the first half of the year. This has to be seen, however, against the 16 per cent decline that took place in the first half. For the year as a whole, residential construction was down 10 per cent. The country is still in the midst of a correction to the building boom in the 1980s that had been stimulated by the relaxation of regulations in the banking sector and a tax structure that is highly favourable to real estate investment. Thus, despite the incentive from lower interest rates this year, construction is unlikely to become a major growth sector until high vacancy rates in over-built commercial real estate and generally depressed housing prices are worked off.

Government expenditure has not been a stimulus to growth. Since the mid-1980s, fiscal policy has been restrictive, as the earlier uncontrolled growth of Federal deficits had to be corrected. In 1990, additional Federal spending cuts and tax increases were enacted just as the recession was beginning. However, the recession made a mockery of deficit-reduction commitments, as the consolidated Federal Government deficit surged to $269 billion in the year ending 30 September 1991 (5 per cent of GDP). The United States Administration expected in February 1992 that the 1991/92 budget deficit would reach $399 billion (almost 7 per cent of GDP) and that the deficit in the proposed budget for 1992/93 would still be as high as $352 billion.[3] The rise in the deficit has mainly been the result of passive changes in revenues and expenditures, rather than counter-cyclical spending efforts. Moreover, in the absence of Federal assistance state and local governments have had to cut back expenditures as the recession hit their revenues, adding a directly contractionary factor. As a result, the current recession is the first one in at least 30 years in which the fiscal stance was not pressing for recovery.[4]

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[2] Data of the United States Department of Commerce, *Survey of Current Business*, February 1992.

[3] *Budget of the United States Government, Fiscal Year 1993* (Washington, D.C., Government Printing Office, February 1992).

[4] The "fiscal stance" - as measured by OECD - was essentially zero (neutral) in 1990 and 1991 (it excludes, in particular, a large contributor to the Federal deficit, i.e., the financing to restructure failed savings institutions and extra support for deposit insurance); the same indicator was expected on the basis of existing policies to be a surplus of 1 per cent of GNP in 1992, reducing aggregate demand and thus exerting a significant pressure retarding recovery (see Organisation for Economic Co-operation and Development, *Economic Outlook*, No. 50 (December 1991), p. 132).

The United States Administration and Members of Congress proposed several fiscal stimulus packages in the early months of this year, but they would only have given a small fiscal impulse if enacted. On the other hand, many calls from outside the Government were heard during the winter months for a substantial, temporary fiscal impulse. The argument was that consolidation of the Federal deficit remained a very important medium-term policy goal, but that short-term exigencies - social as well as economic - required immediate counter-cyclical action and that investment in education and infrastructure would also improve long-term growth prospects. "The nation cannot afford the economic waste and human distress of protracted high unemployment" stated an open letter to the Government from 100 eminent United States economists in March 1992.

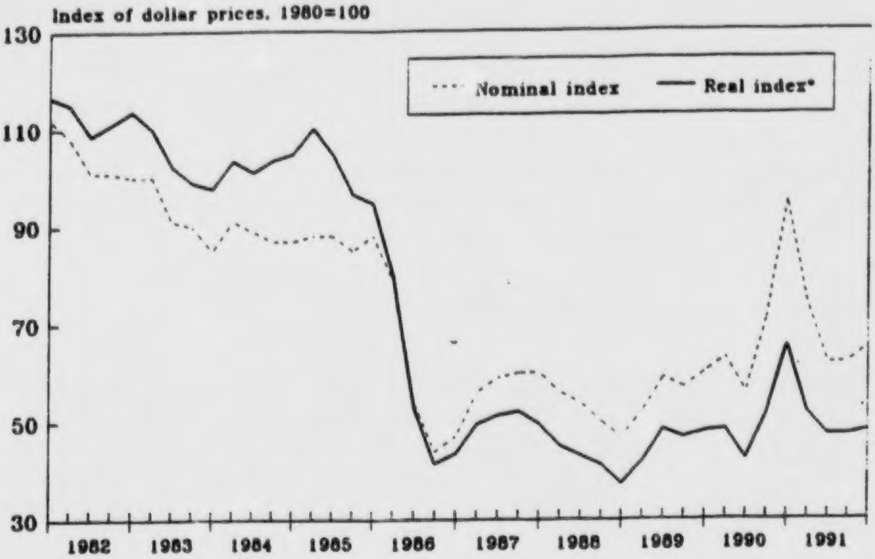
The use of monetary policy in the major economies

Though fiscal policy was hamstrung, United States monetary authorities had more room to act and they did, as did monetary policy makers in the other major industrial countries. But policy actions were very cautious for fear of setting off new inflationary pressures. In the event, repeated doses of monetary easing have been applied in most of the major countries, as the economies failed to respond adequately.

In fact, inflationary pressures were generally weak. The sharp run-up in spot prices on international petroleum markets that occurred in the last third of 1990 was largely unwound by the first quarter of 1991, and the unit values of fuel imports of the industrialized countries returned essentially to pre-crisis levels by the second quarter. Moreover, if dollar fuel prices are deflated by dollar prices of manufactured exports of developed market economies - reflecting exchange rate changes among other factors - the oil-price "shock" in late 1990 is seen to have been much smaller than the nominal dollar data indicate (see figure II.2). In addition, non-fuel commodity prices on international markets weakened last year and were especially low when measured in terms of the volume of manufactured exports of industrial countries that they could buy (see chapter III). Coupled with the recessionary dampening of wage pressure and an attendant slow-down in the growth of labour cost per unit of output, fears about inflation and inflation itself eased, except in Germany.

In the United States, the Federal Reserve reduced its discount rate in several stages from 7 per cent in December 1990 to 3.5 per cent in December 1991, the lowest level since 1964. The full range of short-term interest rates has fallen significantly through 1991; longer-term rates declined less. While such reductions in interest rates ease the cost of servicing outstanding debt, they seem to have provided only a very limited stimulus to demand as there has been little inclination to borrow - or to lend - in the face of lingering recession and high levels of personal and corporate debt. Thus, in spite of the easing of credit terms, the broad money supply in the United States (M_2) actually declined in real terms last year (see table A.8).

Figure II.2. Fuel import prices of developed market economies, 1982-1991



Source: UN/DESD.

* Deflated by manufactured export prices of developed market economies.

In Canada, short-term interest rates declined substantially in the face of the steep recession there. By year-end the prime rate at commercial banks was 6.5 percentage points below its 14.75 per cent peak, reached in summer, 1990; by the end of January 1992 it had fallen an additional 0.5 percentage point.[5]

British authorities have similarly eased monetary conditions: the three-month money rate fell from 15 per cent in 1990 to below 12 per cent in 1991. As in the United States, however, long-term rates have changed less (see table A.8).

In Japan, economic growth weakened in the course of the year. By the summer, the Bank of Japan took the opportunity of a calming of inflationary concerns to ease monetary policy slightly; during the second half of the year it lowered the official discount rate by 1.5 percentage points to 4.5 per cent and then by an additional 0.75 percentage point on 1 April 1992.

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[5] Banks, however, raised their prime rate in early March by 0.75 percentage point in response to a slight tightening of Canadian monetary policy aimed at maintaining a stable exchange rate against the United States dollar.

The unification of Germany added 1.5 percentage points to the growth rate of the western part of the country in 1990 and about 1 percentage point to the growth last year.[6] Large financial transfers were made by the Federal Government to the eastern *Länder*, which were financed by government borrowing. German macroeconomic policy in 1991 aimed at easing the resulting demand pressures. On the one hand, as will be analysed in more detail below, the Government imposed a tax increase from 1 July along with other measures of fiscal restraint. On the other hand, the Bundesbank raised official interest rates, first in February by half a percentage point and then again in August when the discount rate was increased by 1 percentage point and the Lombard rate was raised 0.75 percentage point. Consumer price inflation in western Germany rose above 4 per cent, a moderate rate in many countries but high by German standards (see table A.7). Thus, although the German economy began to contract, the Bundesbank remained firm in its stance against inflationary pressure and its commitment to avoid a wage-price spiral this year. As the year ended, the Bundesbank raised interest rates another notch. As a result, German interest rates became the highest they have ever been in the post-war period.

Government activism in the 1990s

Much discussion of economic policy in the 1980s emphasized the limits to the role of government in a market economy. In many governmental and academic circles, fiscal policy lost favour as a tool for countering the inherent fluctuations in aggregate economic activity, let alone steering national economies onto adequate and sustainable economic growth paths. A common theme in national parliaments and international policy discussions was the need to contain the growth of budgetary expenditure and reduce public sector borrowing requirements. Official borrowing was considered excessive and thought to be less in the national interest than private sector borrowing.

However, the reality of government policy did not match the rhetoric. As the failure to contain the United States budget deficit has shown, political pressures in a democratic government may prevail over economic objectives. Three other cases - from Germany, Italy and Japan - further illustrate this point.

The unification of Germany

Towards the end of 1989, the prospect of German unification, long dismissed as impossible, became all of a sudden a very distinct possibility. By early 1990 the question was no longer whether or when but how and how soon. Proposals for a gradual process of economic reintegration seemed reasonable from a purely economic point of view, but they did not take account of political and social issues, including the prospect of a tide of emigration from east to west. It also could not be said how long the new fluid political situation in eastern Europe would remain. The Government believed it to be of overriding political importance to create an irreversible unification of the country as quickly as possible. Thus, on 1 July 1990 the German Economic, Monetary and Social Union was created and by 3 October the former German Democratic Republic (GDR) became part of the Federal Republic of Germany (FRG).

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[6] See Organisation for Economic Co-operation and Development, *Economic Surveys: Germany* (Paris, July 1991), pp. 127-128.

From the beginning, economic union meant the full integration of the former GDR into the economic system of the FRG.[7] As a result, from July 1990 the economies of the eastern *Länder* became exposed to market forces without any transitional period. Moreover, a political determination had been made to avoid creating a "two-class society" by bringing incomes in the east up to the levels in the west as quickly as possible.

This political imperative clashed with another overriding policy imperative, to avoid setting off inflationary forces in the economy. This required tight control of the fiscal situation. At first, it was argued that the budgetary impact of integration would be moderate, as adjustment in the eastern *Länder* was to be mainly a private, market-driven process. The conventional wisdom said that policy makers should avoid new subsidies to industries, encourage flexibility in the labour market and limit the redistribution of income through the tax system, all in order to minimize political interference in resource allocation through markets. Nevertheless, a limited package of tax and investment incentives, social spending subsidies and privatization measures was adopted, including establishment of *Treuhandanstalt*, the institution that carries out privatization. Moreover, as a result of earlier fiscal consolidation, the general government accounts had gone into surplus in 1989 for the first time in 15 years. The fiscal position was in any case slated to be relaxed, as the final part of a multi-year tax reform - a tax cut of DM 25 billion - went into effect on 1 January 1990.

But when unification began, the demand for eastern goods plummeted, as had been predicted. East German industry virtually collapsed overnight. Its earlier customers in eastern Europe and the USSR could not pay in hard currency and domestic consumers switched to western products. Eastern productivity and quality were drastically inferior and industrial output in the east declined 44 per cent from 1989 to mid-1990. Unemployment rose and migration raised great alarm, although many firms were able with government subsidies to keep large numbers of employees on short-time payrolls. Beneficiaries retained their jobs according to this scheme, but worked substantially fewer hours and were paid in part by their employer and in part out of official funds, with their total compensation amounting up to 90 per cent of their full-time pay.

At the same time, under political pressure from unions for convergence of wage rates, negotiations raised wage rates in the east and targeted nominal wage equality with the west by 1994, although productivity in the eastern *Länder* is about one third of that in the west. Western business executives found eastern infrastructure more obsolete than expected and environmentally unacceptable. Moreover, the claims of former property holders in the eastern *Länder* remained to be settled, so ownership of assets was not clear. Investors thus hesitated to go into the east.

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[7] For details on the initial integration strategy, see Leslie Lipschitz and Donough McDonald, eds., *German Unification: Economic Issues*, IMF Occasional Paper No. 75 (December 1990).

The economic collapse east of the Elbe in 1990 was a clear sign that successful integration of two such vastly different economies required more radical policy measures. Government expenditure on public transfers to the east in the first six months of economic integration ran about twice the level that had been expected during the summer. But the Government would have to play an even more forceful role to encourage new investment or see its political commitment to the east become embedded in persisting consumption subsidies.

An additional two-year DM 24 billion public spending package was agreed on 8 March 1991, focusing on investment by local authorities in schools, hospitals and social institutions. Funds were also earmarked for a variety of job-creation measures as well as investment programmes in housing, shipyards and environment.

These and other transfer and investment expenditures for the east raised net German government spending by about DM 105 billion in 1991 and about DM 125 billion was anticipated in 1992.[8] Together with unforeseen expenditures in assuming a share of the cost of the war in the Persian Gulf and transfers to the Soviet Union, this raised the general government deficit to 3.7 per cent of GNP last year and almost the same level was forecast for this year.[9]

Germany's hard-wrought budget discipline was thus sacrificed for a higher political goal. Government borrowing had to be resorted to in 1990, given the quick pace of events, but by 1991 the need for budgetary adjustment was clear to all. Thus, in March a one-year income tax surcharge of 7.5 per cent was agreed, to begin in July, and in September the Federal Government introduced legislation to reallocate some transfers from the old *Länder* to the new through additions to the federal and state Unity Fund for the east.

Although the Bundesbank leaned against rising inflationary pressures and raised interest rates, the public-sector deficit could easily be financed. Increased government deficits, even very large deficits, can thus be found appropriate as short-run policy choices under certain circumstances even in the most economically cautious countries. This notwithstanding, a new budget consolidation was programmed under the 1992 fiscal budget and medium-term plan. In early 1992 the Government agreed to raise the value-added tax as of 1993 and further tax and expenditure adjustments can be expected, as the Government is committed to return to a more normal fiscal balance by mid-decade.

Italy after Maastricht

Countries participating in the European Monetary System (EMS) accept a strong measure of discipline in monetary policy as a consequence of effectively fixing their exchange rates *vis-à-vis* other EMS currencies and eliminating controls on capital movements. However, restraints on fiscal policy have been weak and indirect. In the case of Italy, joining EMS in 1979 meant that the large fiscal deficits that began in the early 1970s could no longer be financed with the help of low real interest rates under rapid inflation. Italy's general government deficit in the 1980s nevertheless averaged 11 per cent of GDP, about the same as in the second half of the 1970s (10.4 per cent). Although deficits of this magnitude were readily financed, Government interest payments rose from 5 per cent of GDP in 1980 to 10 per cent last year. Now, however, under the agreement at the December summit of the European Community (EC) at Maastricht, the Netherlands, the process was set up for establishing the Economic and Monetary Union (EMU). It requires, *inter alia*, that budget deficits and other key macroeconomic indicators of participating countries be harmonized by 1996 (see box II.1). For Italy, this means a sharp adjustment.

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[8] These data are net of additional tax revenues generated by the spurt in economic growth associated with unification in 1990 (based on the joint analysis of five major German research institutes, *Ifo Digest*, vol. 14, No. 4 (December 1991), p. 19).

[9] Data are on a national income accounting basis for the former Federal Republic of Germany. The general government deficit had already risen to 2.5 per cent of GNP in 1990, after having been pushed to nil the year before (see table A.8).

To reduce the overall deficit in accordance with the Maastricht target, Italy will have to run a substantial surplus in its "primary balance", i.e., the budget balance excluding net interest payments on public debt. Italy reduced its primary deficit from 4-5 per cent of GDP in the mid-1980s to 1.5 per cent in 1989 and 1990, and to an estimated 0.4 per cent in 1991.[10] But with the growth of debt-servicing obligations, this decline still left the overall deficit unmanageably high.

Deficit reduction efforts concentrated first on increasing revenue, largely by means of once and for all measures. The Government introduced two tax amnesties in the 1989 and 1991 budgets, as well as measures to reduce tax evasion, which has been pervasive in Italy, especially among small businesses and the self-employed. There have been various increases in value-added tax rates, excise taxes and fees for public services. Social security contributions of employers and employees were also raised. The scope for further increases in tax rates, however, now appears limited as Italian rates are close to the EC average.

In addition, both the 1991 and 1992 budgets provided for revenue increases through sales of public assets. However, only about half of the expected revenue from privatization in 1991 was realized. There is also controversy about how to share the proceeds of privatization between the Treasury and the privatized enterprises, as the latter need funds for restructuring and investment in technology. The privatization measures in the 1992 Budget (Finance Act), which account for a quarter of the planned budget savings, were approved in Parliament at the end of January 1992. It remains to be seen whether the amounts involved can be realized within the course of the year, given the limited size of the Italian stock market and the need to transform the enterprises involved into independent corporations and to secure Government and Parliament approval.

The bulk of the budget correction in Italy thus entails reducing Government expenditures. Although expenditure as a share of GDP has largely stabilized in the EC, it has continued to rise in Italy, in particular as regards government consumption and transfers to households (see table II.3). Italy could follow a different expenditure trend than its partners only if it could pay for it.

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[10] Data are general government primary balances, defined on a national accounts basis (see OECD, *Economic Outlook*, No. 50 ..., p. 131).

Table II.3. Current government expenditure in Italy and the European Community, 1980-1991

(Percentage of GDP)

	1980	1987	1988	1989	1990	1991
Interest payments						
Italy	5.3	8.0	8.2	9.0	9.7	10.1
EC average	3.2	4.8	4.7	4.8	5.0	5.2
Non-interest expenditure						
Italy	32.4	37.7	37.9	38.0	38.5	38.8
EC average	37.6	39.6	39.0	38.3	38.5	39.7
of which						
Government consumption						
Italy	14.7	16.8	17.0	16.7	17.3	17.4
EC average	18.2	18.6	18.3	17.9	18.0	18.1
Transfers to households						
Italy	14.1	17.4	17.5	17.6	18.0	18.3
EC average	15.9	17.4	17.2	16.9	17.0	17.1
Total current expenditure						
Italy	37.7	45.7	46.1	47.0	48.1	48.9
EC average	40.8	44.4	43.7	43.1	43.5	44.9

Source: Ministry of the Budget and Economic Planning of Italy, *Relazione Previsionale e Programmatica per il 1992* (Rome, 1991), p. 18.

Government social expenditures and transfer payments have been on a rising trend since the 1970s, partly to make up for earlier deficiencies. In the early 1970s, the years of compulsory schooling were extended, the health-care system was reformed, health-care benefits were linked to earnings instead of contributions, and so on, opening a gap in public finances that has never been closed.[11] There was also a gradual change in policy from enterprise aid and capital expenditures to income transfers, particularly in the less-developed south of Italy. The transfers were carried out in direct and not-so-direct ways. For example, not only were unemployment benefits raised and pension benefits made among the most generous in Europe, but a practice arose of according disability and seniority benefits under liberal interpretations of need or qualification.[12] Together with health care expenditures, pension reform has become a major focus of policy attention in Italy.

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[11] See Francesco Giavazzi and Luigi Spaventa, "Italy: the real effects of inflation and disinflation", *Economic Policy*, No. 8 (April 1989), pp. 135-171, especially pp. 158-159.

[12] See, for example, the assessment by the OECD Economic and Development Review Committee (OECD, *Economic Surveys: Italy* (Paris, 1991), pp. 57-58).

Box II.1. Maastricht: halfway to a United States of Europe

On 11 December 1991, the European Council, meeting at summit level at Maastricht, the Netherlands, adopted a document that will strengthen the union of the European Community (EC). Maastricht is not, however, the final step. By the time all the new policy commitments are implemented at the turn of the new century, the Community may wish to further strengthen its union by according more authority and a larger budget to its central institutions.

The Maastricht agreement will nevertheless set the EC on a clear path to economic and political union, even if the word "federal" does not appear in the document, and the United Kingdom reserved the right in a separate protocol to "opt out" of the new structure at a later date. While important political and security commitments were part of the Maastricht treaty, it seems in particular that the new economic structures will step up pressures for a further centralization of decision-making.[a]

The economic part of the Maastricht agreement sets out the procedures for transforming the European Monetary System (EMS) into an Economic and Monetary Union (EMU) that would overcome some of the shortcomings of the EMS. Currently under EMS, 10 of the 12 EC member States fix their exchange rates *vis-à-vis* each other (nominally, they agree to maintain their exchange rate within a narrow band around a rate set against the European currency unit (ECU), a composite of major European currencies). Exchange rates can be changed by mutual agreement, although the last general realignment was in January 1987 and no further realignments are expected. In addition, since adopting the Single European Act in 1985, the Community has been taking down all barriers to the flow of goods, people and finance across borders. By the end of this year, it will have completed the creation of a single internal market. With finance thus free to flow across borders, the only way to maintain fixed exchange rates is to closely coordinate monetary policies so that changing differences in interest rates do not cause disruptive transborder flows.

As EMS has worked in practice, the largest economy sets monetary policy according to domestic preferences and local needs, and the rest of the EMS members are more or less constrained to follow suit. The attraction of this arrangement has been that the firm anti-inflationary mandate of the Bundesbank, the German central bank, has been an anchor for monetary policy in other countries. The difficulties arise when Bundesbank policies force adoption of policies elsewhere that run counter to local needs. A case in point arose last year when repeated actions to raise German interest rates to rein in the surging German economy prevented other central banks from taking steps to ease monetary conditions to counter their weakening economies.

By 1999, under the new EMU, national currencies would be replaced by a single European currency (the ECU) and a single Community institution would set monetary policy. As noted by the Governor of the Central Bank of Ireland, the loss of formal sovereignty over monetary policy - which for small countries had been greatly circumscribed anyway under EMS - was balanced by acquiring an actual input into the formulation of European monetary policy.[b]

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[a] For the full text of the Maastricht agreement, see *The New Treaty on European Union: Legal and Political Analyses* (Brussels, Belmont European Policy Centre, 1992).

[b] Ireland has perhaps a unique perspective on monetary union as it had been part of a monetary arrangement with the United Kingdom for 150 years, from which it broke away after sterling became a relatively high-inflation currency in the 1960s and 1970s and it subsequently joined the EMS on its formation in 1979 (Maurice F. Doyle, speech to the Centre for European Policy Studies, Brussels,

Something, however, is still missing. The Maastricht agreement contains certain conditions on the convergence of national policies so that participants in the final stage of the agreement begin more or less in a comparable macroeconomic - or more properly, monetary - situation. The criteria are that a country's rate of inflation should be within 1.5 percentage points of that of the three best performing Community members, its exchange rates within the exchange rate mechanism of the EMS should be stable, long-term interest rates should converge within 2 percentage points of the three best performing member States in terms of price stability, and the financial position of the Government should be acceptable.[c] If in 1996, a simple majority of member States satisfies the convergence criteria, a two-thirds majority of States can decide to implement the single currency and central bank by 1 January 1997. Failing that, the new system would be established by 1 January 1999, with countries that meet the criteria taking part.

Nothing, however, is required with respect to rates of growth of real income or levels of output per capita. In principle, countries with high rates of inflation could squeeze out their inflation in time to meet the criteria at the expense of a serious contraction in output and income. They would qualify, but the situation might not be sustainable in a politically meaningful way.

Ultimately, in other words, the Community needs to hold out the promise of a convergence of real incomes per capita. Yet under the present and agreed structure, the economic institutions of the centre have only a limited role. Individual national Governments are free to pursue macroeconomic policy stimuli for growth, but their expenditure would be effectively restricted to a small excess over fiscal revenues, the limits being determined by what the Government can finance by borrowing from the public without unduly raising interest rates. There would also be Community oversight. National borrowing from the regional monetary authority would not be allowed.

This is desirable from the point of view of inflation control, but severely limits the scope for national growth policies or counter-cyclical fiscal policies, particularly for the relatively poorer regions of the union. If the centre were so empowered, it could borrow on far better terms than the individual States and pass on funds to member Governments to cover mutually agreed deficits. Moreover, a union-wide fiscal policy with stronger "automatic stabilizers" for regions hit hardest by economic shocks would make for a politically more robust arrangement.[d] There is thus a contradiction between what the union needs to be a dynamic political entity and the present commitment to a limited central authority and fiscal autonomy for the member States.[e]

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11 December 1991).

[c] The formal requirements on the fiscal side of harmonization are that the consolidated general government budget deficit should not exceed 3 per cent of GDP and the ratio of public debt to GDP should not exceed 60 per cent. Efforts to meet the targets are, however, subject to interpretation by the Community and it is possible that a country making adequate progress, say, in consolidating its budget but failing to meet the debt-to-GDP target might be deemed to qualify to join in the final stage of EMU.

[d] In the case of the United States, the regional stabilizers principally take the form of lower federal taxes and larger federally-funded unemployment payments (see Xavier Sala-i-Martin and Jeffrey Sachs, "Fiscal federalism and optimum currency areas: evidence for Europe from the United States", *National Bureau of Economic Research Working Paper*, No. 3885 (October 1991)).

[e] This argument is developed in greater detail in "European Monetary Union: problems remaining after Maastricht", *Supplement to World Economic Survey 1991* (United Nations publication, forthcoming).

Improving the flexibility of the labour market has also become a big issue. Wage rates in medium and large-scale sectors have long been set through centralized wage bargaining and wage indexation (*scala mobile*). Coupled with a Government-condoned policy of wage equalization between the north and south of the country (except for a 2 per cent differential in hourly wages), substantial subsidies have been required to offset the large gap in productivity between the two regions. Moreover, a Wage Supplementation Fund (*Cassa Integrazioni di Guadagni*) compensates public and private sector workers who have been made redundant for a large part of lost salaries for up to two years. Fund disbursements have been growing on the heels of recent restructurings in the private and public sectors.

Successive Italian Governments have followed a policy of active participation and intervention in almost every area of economic activity, coupled with a readiness to dispense funds and issue regulations to reach economic and social goals. The State controls two thirds of the banking system, three fourths of transportation and communications and all public utilities. It is active in basic industries, transport equipment and chemicals, as well as electronics and food, mainly through holdings with private participation. These have had substantial budgetary consequences. Regional policy has increased the commitments, as the Government has given large investment incentives in the south and has imposed costly procurement requirements from southern firms. Moreover, the Government assists ailing private firms through provision of equity, ordinary and subsidized credits and, if all else fails, takeover by a State corporation for restructuring with a view to a later return to the private sector.[13]

The Italian economy is thus characterized by a large public sector and a heavily dependent private sector, which is not the ideal towards which the European Community is aiming. The model may have given Italy one of the highest economic growth rates in the EC over the past two decades, but even aside from the budgetary difficulties discussed here, the model may have reached its limits. Competitive pressures from abroad have risen and the European Commission is increasingly scrutinizing State aid to industry and other market-distorting mechanisms in member States.

Substantial investment is needed in Italy to restructure traditional industries and invest in new technology and the State has a substantial role to play. Government subsidies for innovation and research and development spending have been fruitful and less market-distorting than many other subsidies.[14] The need, in brief, is not for a wholesale withdrawal of the Italian State from the economy, but for a redirection of the effort within a sustainable fiscal framework.

More generally, the Italian Government can only maintain its social and economic policies in real terms if its services and transfers are provided more efficiently and targeted more narrowly as well as funded more fully through tax revenues. In the past, inflationary financing provided an escape valve to the inability to forge a political consensus on financing the economic and social role of Government. The EMS tightened that valve and the EMU is closing it.

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[13] In the view of the OECD Review Committee, "Despite political leverage, [the *Societa di Gestioni e Partecipazioni Industriali*] in its 20-year history has been able to restore the financial health of 205 companies, with subsequent resale to the private sector" (OECD..., p. 79).

[14] OECD..., p. 80.

Japan invests in fiscal policy

Ever since the end of the Second World War, Japanese Governments have abhorred fiscal deficits, while using them to play a macroeconomic policy role when needed. Indeed, following the severe inflation before and during the war, the Finance Act of 1947 established very restrictive conditions under which the Government could issue bonds. No medium-term or long-term bonds were issued before 1965, a year of sharp economic slow-down. The bonds issued then and subsequently, which were called "construction bonds" (*Kensetsu Kōsai*), were formally meant to finance public construction and a limited number of other activities. Ten years later, after the "oil shock" and subsequent recession, the Government issued the first bonds in exception to the Finance Act restrictions. In Japanese discussions, issuance of those "deficit-financing bonds" (*Tokurei Kōsai* or *Akaji Kōsai*) were taken to indicate the existence of budgetary disequilibrium. Such bonds were issued in substantial amounts until the mid-1980s, as policies to eliminate the deficit they represented had to be postponed repeatedly. The goal of ending issuance of the bonds was finally achieved in 1990.[15]

Currently, the Government is working under a medium-term target to reduce the public sector borrowing requirement. The Ministry of Finance submitted its Fiscal Policy Reform Plan (the medium-term fiscal policy perspective), at the end of January 1992 to cover fiscal years to 1995. It revised the earlier plan submitted in March 1990, owing to the present slow-down of the economy, but kept the original target of reducing the borrowing requirement to less than 5 per cent of budget expenditures by fiscal 1995. According to the old plan, the issuance of construction bonds would be reduced by ¥450 billion annually from 1992 to 1995. However, with the prospect of revenue declining this year owing to the economic slow-down, the budget for 1992 envisions the issuance of over ¥7 trillion in construction bonds. This would put the borrowing requirement over 10 per cent (compared to 7.6 per cent in 1991) of budget expenditure. The Ministry now plans to contract the deficit by ¥1.15 trillion annually over the remaining years, on the assumption that economic growth will begin to accelerate again in the next fiscal year.

In terms of internationally standardized measures, the central Government currently runs a deficit of about 1.5 per cent of GDP while the general government sector - including local authorities - has been in surplus since 1987. This follows a period of large deficits in the late 1970s and early 1980s, when they peaked at 5.5 per cent of GDP in 1977. The deficit was initially caused by the impact of recession and certain counter-cyclical expenditures, but government investment and related capital transfers were also increased in support of adjustment activities (see figure II.3). Government-supported capital formation has, in any event, been consistently maintained at a high level, roughly twice the average for developed market economies as a whole.[16] The considerable adjustment of the general government accounts that did take place, from a deficit of over 5 per cent of GDP in the late 1970s to a surplus of over 2 per cent by 1990, resulted from revenue increases.[17]

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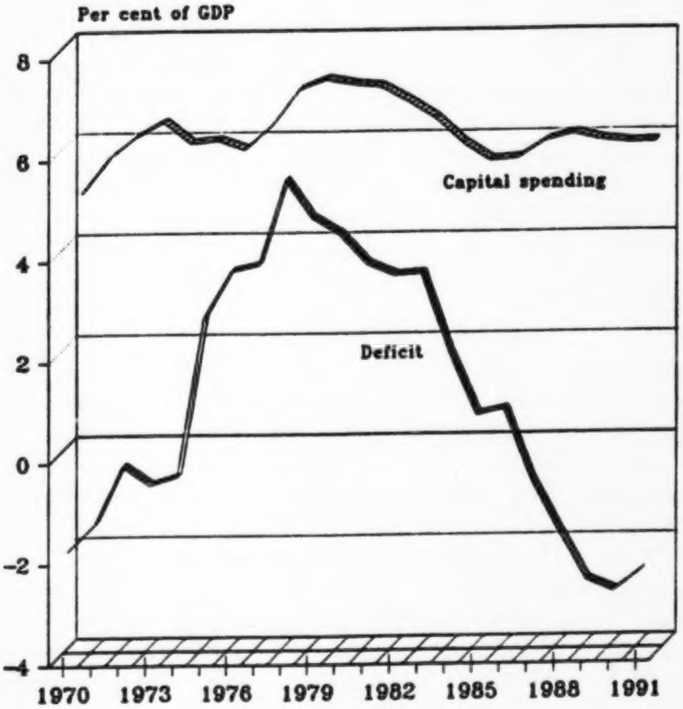
[15] For additional details on this period, see Kazumi Asako, Takatoshi Ito and Kazunori Sakamoto, "The rise and fall of deficit in Japan, 1965-1990", *Journal of the Japanese and International Economies*, vol. 5, No. 4 (December 1991), pp. 451-472.

Figure II.3. Government capital spending and overall balances in Japan, 1970-1991



Source: UN/DESD and OECD (note: data are for general government; capital spending includes land purchases).

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[16] See Howard Oxley and John P. Martin, "Controlling government spending and deficits: trends in the 1980s and prospects for the 1990s", *OECD Economic Studies*, No. 17 (autumn 1991), pp. 145-189, especially table 2.

[17] The share of general government revenue in GDP rose 8.4 percentage points from 1978-1979 to 1988-1989, which was more than the 7.1 percentage point improvement in the GDP share of the budget balance. The revenue increase made room for an increase in current government expenditures of 2.4 percentage points as a share of GDP (calculated from data on a national accounts basis of the United Nations and OECD).

The Japanese fiscal response to the slow-down of 1991 was consistent with this broad pattern. Aside from a passive deterioration in the budget balance owing to the slow-down in economic growth, certain discretionary expenditures were increased, all of which were in the nature of additions to investment. The major technique for so doing was already clear in a supplementary budget for 1991, adopted in December, wherein the Government added almost ¥2 trillion to the Fiscal Investment and Loan Programme (FILP) - in Japanese, *Zaiseitōyūshi* or *Zaitō*. In fiscal 1992, the FILP is slated to come to ¥41 trillion, amounting to over half of the General Account Budget. It will be the first time in five years that FILP lending has grown by double digits.

FILP resources do not derive from direct budgetary allocations but from the surplus funds and reserves of various government accounts (e.g., National Pension Fund and Postal Savings Fund) and proceeds from various bonds and borrowings guaranteed by the Government. The FILP investments must earn sufficient income to cover obligations on the resources deployed. The Government thus engages in socially and economically important, yet income-earning investments. In fact, recipients of FILP funds are often themselves intermediaries, including local authorities. Certain financial institutions receive FILP funds, such as the Japan Development Bank, whose allocation is to be raised 22 per cent this year. It will, in turn, boost its lending for "living and urban infrastructure" projects and major transportation improvements. Other recipients of FILP resources include the Japan Export-Import Bank, the People's Finance Corporation and the Small and Medium Business Finance Corporation.

Although FILP expenditures are proposed by the Government and approved by the Diet, they are not considered part of the budget *per se*. The formal budget for 1992 was an austere one, as the prospects for tax revenue were subdued. The expenditure increase was thus kept to less than 3 per cent, compared to over 6 per cent in the initial 1991 budget. Yet, in keeping with the emphasis on investment, the overall public works component of the budget was to grow by 4.5 per cent.[18] The 1992 budget also contained temporary tax increases to offset some of the revenue shortfalls from the slow-down, but it also contained provision for a 36 per cent increase in construction bonds.

In sum, as the concern about economic slow-down grew, the Government announced several economic revitalization measures, including utilizing government financial institutions to expand resources for small and medium-sized companies and scheduling more public works to be started in the first half of the fiscal year. It even requested public utilities, such as electricity and telecommunications, to follow suit in accelerating their own investment expenditures. The net effect of these various components of the Japanese fiscal effort is expected to be a small stimulus to the economy as a whole and a somewhat more significant addition to gross investment. All in all, it is a strategy to wed demand management and supply enhancement.

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[18] Moreover, under the Government's Local Fiscal Plan, which serves as a guideline for the fiscal operation of local authorities, investment expenditures were to rise 7.6 per cent, compared to an overall rise of under 5 per cent.

The transition to new market economies

A revolution is under way in the eastern part of Europe and in the former Soviet Union. In its economic dimension, it entails a complete change of system. Without precedents against which to compare national progress, Governments have been changing policy-making teams, sometimes frequently. Expectations have tended to be over-optimistic and disappointments have been sharp. Untried policies and considerable "learning by doing" are the order of the day. As of early 1992, these economies were still in transition: the old order of central planning had broken up, but the new system had not yet crystallized.

In such a situation, severe economic disruption might be expected; indeed, with output falling 16 per cent last year, it was happening. Output fell sharply even in the countries that were expecting recovery to begin, notably Poland and Romania (see table A.3). Activity in the private sector has begun to flourish, but, because of its small share in overall activity, that could only moderate, not arrest, the decline. In the former Soviet Union, national income in 1991 was at least 15 per cent less than in the previous year.[19]

By all indicators, the region is in the grip of a savage economic contraction. The fall in economic activity is without precedent in industrialized countries. Levels of output in 1991 were no higher than ten years ago (see table II.4). Investment fell to the levels of the middle 1970s. The last three years have witnessed such deep cuts in investment outlays that even essential maintenance has been delayed or neglected, threatening much of the viable capital stock.

In the Soviet Union, practically all of the increment in national income in the period 1986-1990 had been expended on current consumption and on non-industrial construction. In 1991, the stock of unfinished construction grew by 30 per cent; in 1990 it had already amounted to 17 per cent of investment, compared to 5 per cent in 1985. According to estimates of *Goskomstat* of the USSR, the Union ended with two thirds of machinery and equipment in industry technically obsolete and 42 per cent of fixed assets due for replacement. In individual sectors, the situation was even worse; e.g., in the Russian Federation's oil refining industry, 90 per cent of equipment was reported to be due for replacement.[20]

Industrial production has been especially hard hit. Anti-inflationary demand restraints sharply cut back domestic purchases in eastern Europe. With the collapse of trading relationships under the Council for Mutual Economic Assistance (CMEA), orders from neighbouring CMEA countries fell by a half or more, seriously hurting production for exports. Exports to hard-currency markets have not been able to make up the slack (see chapter III). Import restraints in some countries deprived industry of necessary raw materials, equipment and replacement parts, in the USSR especially in the food, pharmaceuticals, textile, garments and footwear sectors.

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[19] Quantitative data from the economies in transition must be interpreted with great caution as national statistical systems and data collection are in flux. In the past, the paucity of data series on the Albanian economy precluded its inclusion in the *Survey*. Although new information on Albania is becoming available, it was not possible to include it in a systematic way in the current *Survey*.

[20] "Ob itogakh funktsionirovaniia narodnogo khozyaistva Rossiiskoy Federatsii v 1991 godu", *Gosudarstvennyi komitet Rossiiskoy Federatsii po statistike* (Moscow), 1992, p. 37.

Table II.4. The last year in which economic indicators matched 1991 levels in transition economies

	GDP at market prices	Gross industrial production	Gross investment	Private consumption
Bulgaria	1979	1979	1977	1983
Czechoslovakia	1979	1979	1978	1988
Hungary	1981	1978	1975	1983
Poland	1982	1975	1974	1983
Romania	1980	1979	1973	1988
Soviet Union	1983	1985	1984	1989

Source: UN/DESD and ECE.

The deterioration in the agricultural sector became an international focus of attention, particularly in the countries that were relatively late starters in the transformation to market economies, namely Bulgaria, Romania and the former Soviet Union (see table A.10). Bulgaria, formerly a food exporter to the east and the west, was forced to import large quantities of food. In the former Soviet Union, the grain harvest dropped 25 per cent last year. The acreage sown fell 3.3 million hectares, after having fallen 2.1 million hectares from 1986 to 1990.

The rural economy has generally been buffeted by inflationary cost increases and heavy taxation, making many formerly profitable farms unprofitable. The political debates continue about new land laws and how to reprivatize the agricultural sector. The claims of earlier owners of the land largely remain to be settled and some unregulated transfers of property have made the people working in the still collectivized sector uncertain even of their continued habitation on those properties.

At the same time, markets for the agricultural output of the countries with more successful harvests were not readily found. Thus, while Hungarian and Polish exports to western Europe increased substantially, they were insufficient to offset the steep drop in sales to former CMEA partners. Coupled with domestic demand constraints, this has led to large unsold supplies in those countries. As in the past, farmers expected their Governments to provide guidelines and intervene to help them. The assistance that could be mustered was only sufficient to arrest a drastic collapse in confidence, but not enough to stop the decline in production.[21] In this policy environment, production and exports in 1992 will suffer.

Inflation, except in Czechoslovakia, exceeded by a wide margin what policy makers had planned. Czechoslovakia pushed down the month-to-month inflation rate from 26 per cent in January 1991 to practically nil by September and maintained a low rate for the rest of the year. At the other extreme, triple-digit inflation became the order of the day in Bulgaria, Romania and in the disintegrating Soviet Union. In Poland, the target had been to reduce inflation to 1 per cent a month before the end of 1991. The actual monthly rate declined to virtually zero by July, but then began to rise as macroeconomic policy was eased. For the year as a whole, the inflation rate was thus 70 per cent (it had been 584 per cent in 1990). The 1991 Hungarian inflation rate, while half that of Poland, was nevertheless higher than in 1990 (see table A.11).

Inflation exploded in the USSR: consumer prices in October 1991 were 2.1 times and wholesale prices 2.7 times higher than a year before, in part due to a price rise put into effect in April. But the real spurt of inflation occurred at the very end of 1991 and the beginning of 1992, especially after the liberalization of prices on 2 January. By mid-February, prices had jumped at least 350 per cent above the year-end 1991 level.

The high cost of transition

The excitement in 1989 over the political opening for the full economic transformation of the centrally planned economies of Europe has now been tempered by the realization of how arduous the transformation will be. The strategy that carried the day in many countries was to make the transition as rapidly as possible, accepting wholesale disruption of economic activity as a short-term cost. This was the plan of attack that the German Government adopted for the former German Democratic Republic, with the rest of Germany absorbing most of the cost of the changes. In the first year of what might be called *shock therapy with a safety net*, GDP in the eastern *Länder* fell 25 per cent; last year it fell another 19 per cent. Output is expected to begin to recover this year, with growth of about 10 per cent, which will leave GDP still one third less than in 1989. This is an enormous decline of economic activity and a very large scale of financial support is needed to make it socially and politically possible. In this sense, the German case is unique; in no other country has there been an equivalent "shock absorber".

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[21] The decline in livestock is worrisome indeed. In Hungary, for example, in the first three quarters of 1991 the stock of hogs decreased by more than 20 per cent, that of cattle by 6 per cent, poultry by 18 per cent, sheep by 20 per cent (*Népszabadság* (Budapest), 22 November 1991, p. 5).

The experience of the Soviet Union was at the other extreme in the sense that there was a long period of equivocation and hesitation about economic and political transformation, as forces for reform contended with the opposition. This was reflected in economic stagnation and then decline.[22] The *dénouement* came in late August 1991. The failure of the half-hearted attempt at a *coup d'état* temporarily paralysed the entrenched opposition to political and economic reforms, thus creating an opportunity to radically speed up the process of transition. But at the same time, the paralysis of the old centre made it impossible to contain the drive for independence in the constituent republics. Within a fortnight following the *coup*, the largely symbolic declarations of sovereignty issued by the republics in 1989 and 1990 were solidified by acts of full independence in most of the republics. The three Baltic States regained their independence early in September and in October became members of the United Nations. The Governments of the new States became new *loci* of decision-making. With this unravelling of the Soviet State, the political and economic transformation of the USSR split into the parallel and interrelated, but far from uniform, transformation of 15 separate States.

The short-run effect of these events was an intensification of the disruption of economic activity. The traditional mechanisms for economic exchange and distribution broke down without new mechanisms to replace them. The successor countries and their Commonwealth of Independent States have thus begun their economic transformation, but neither the path of their transition nor the character and mix of State and private activity towards which they are aiming is clear yet.

Most of the other eastern European countries can be said to have begun their transitions to market economies. Stabilization-cum-liberalization policies have started to bear fruit in the countries that began the process first. Thus, serious shortages have disappeared in Czechoslovakia, Hungary and Poland. The social cost, however, has been high and popular impatience with the sacrifices is growing. This was clear in the parliamentary elections last year in Poland, an early *shock-therapy* country. Voters expressed a wish to loosen the contractionary policy in force since January 1990, voting its proponents out of office. Disaffection has also been shown in Hungary by declining voter participation in local elections.

Czechoslovakia started an ambitious transformation exercise at the beginning of last year, with good results in arresting inflation, as noted above. But one by-product was that strains between the Czech and Slovak components of the Federal Republic intensified substantially. Indeed, the stabilization programme affected the two republics very differently; thus, the 1991 unemployment rate in the Czech Republic was 4 per cent and in the Slovak Republic almost 12 per cent.[23]

The increase in the number of unemployed last year was dramatic (see figure II.4). In Bulgaria and Czechoslovakia there was a sixfold increase in the unemployment rate; in

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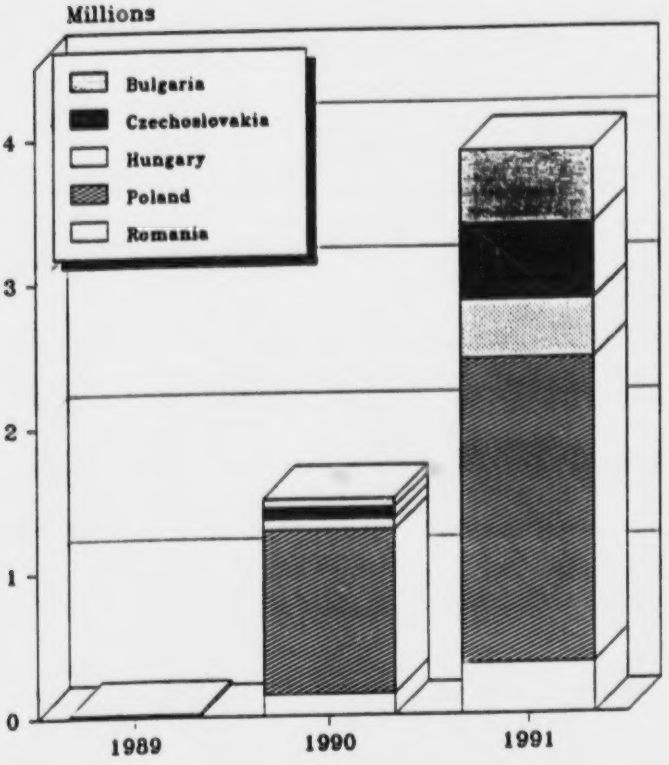
[22] The period 1989-1990 was reviewed in *World Economic Survey, 1991...*, pp. 22-25.

[23] *Hospodářské noviny* (Prague), 11 March 1992, p. 15.

Hungary the increase was more than fourfold; Poland witnessed a more than 50 per cent increase (and this was on top of unemployment that had already risen to 6.1 per cent in 1990). Romania's rate increased fivefold. These rates of unemployment are very high by historical standards, particularly the more than 11 per cent for Poland and Bulgaria's 9.6 per cent, and no end to the problem is in sight.

Figure II.4. Unemployment in eastern Europe, 1989-1991



Source: UN/DESD, based on national statistical publications.

The continued worsening of the employment situation is also seen in the dwindling number of unfilled vacancies. In Czechoslovakia, for example, there were about 100 unfilled vacancies per 100 unemployed job seekers in December 1990; by the end of December 1991 there were only 12. In Hungary, there were 21 vacancies per 100 job seekers at the end of 1990, but only 5 at the end of 1991. In Poland, there were 9 vacancies per 100 job seekers in December 1990 and only 2 in December 1991.[24]

Some unemployment is an unavoidable consequence of the economic transformation process, as the work force needs to be reallocated in a more efficient way; but some is fallout from anti-inflationary demand contraction and policies that did not work as expected. Since the fight against inflation is not over, the anti-inflationary component of unemployment is likely to remain this year, adding to that associated with economic restructuring. Even in countries that began their transition programmes relatively early, management will still be under great pressure to shed non-essential labour and it is certain that the evolving but still rather limited private sector will not be able to absorb the additional pool of workers for some time. Thus the prospect is that unemployment will worsen in the short run.

Although all of these countries introduced unemployment insurance schemes some time ago, the benefit entitlements are now almost exhausted. Moreover, economic decline caused a substantial decrease in the enterprise and employee tax payments that financed the schemes.[25] At the same time, some economic units shed labour by accelerating the retirement of their employees, which increased the outlays for pension benefits. The result has been an unanticipated drain on the budget. As long as budgets remain under tight constraint, social expenditures are vulnerable. Indeed, since pensions are not indexed but changed periodically, their real value has been declining.

Real wages and salaries declined last year, after earlier declines (see table A.11). The real value of family and child-care allowances also fell. Most families appear to have sought to cope with this income loss in the "first economy" by extra work, particularly in the "second economy", i.e., the informal and private sectors.[26]

All in all, the drastic and sudden decline in household income, social transfers and, in some cases, in public expenditure on health, education, and child care is making the transition very painful for large portions of society. The safety nets for vulnerable groups are inadequately funded and affected by design problems. Poverty is thus growing and there is a gradual but worrying increase in homelessness. Yet, distributive issues and social policy have remained, by and large, a marginal topic in the debate about the transition to market economies.[27]

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[24] Główny Urząd Statystyczny, Federálni Statistický Úřad and Kőzponti Statisztikai Hivatal, Bulletin (Budapest), vol. 1, No. 1 (1991), p. 8 (this first joint statistical publication of Czechoslovakia, Hungary and Poland marked the beginning of a new cooperative development in the region). At the end of December 1991, in Hungary there were 406,000 unemployed and about 11,000 unfilled vacancies (*Heti Világgazdaság* (Budapest), 25 January 1992).

[25] Thus, in order to increase the social security income of the budget in Hungary, social security taxes of both enterprises and employees have been substantially increased, as from 1 January 1992.

[26] One such mechanism in some countries involved employees leasing the use of equipment in State factories for private production after production quotas had been filled. However, after central planning was officially discontinued, this particular practice was discontinued by law.

In the economic history of the centrally planned economies in eastern and central Europe the State has had the double task of managing the economy and shaping societal relations. Policy developments since 1989 seem to have exposed the limits of the role of the State as a manager of socio-economic change, while also creating a certain disenchantment with the newly dominant market ideologies of development. A certain degree of intellectual disarray has now begun to set in and various forms of political decay seem possible. Fear is spreading that new democratic institutions will be at risk if more authoritarian types of government come to be seen as an acceptable response to today's social and economic instability. There is already a decline in certain forms of behaviour. Although individual freedom has been strengthened by the weakening of various forms of authority and of previously accepted values of collectivism, in a sense society has become more fragile.

The Soviet Union dissolves itself

The year 1991 will go down as a turning point in world history. A superpower crumbled from internal discord and disarray provoked, to a major extent, by economic difficulties. The statistics on economic decline in the USSR, as noted previously, showed a system ceasing to function. For all its indisputable faults, the command system had a certain integrity, established rules and procedures, hierarchical structures and enforcement mechanisms that held the national economy together for decades. This structure was partially demolished to give way to market mechanisms.

The central ministries and other economic agencies at first tried to preserve some semblance of supply management and production coordination. But their operating principles were the diametrical opposite of the "invisible hand"; and they were not capable of "planning" their own demise. Today, the ministries simply are no longer there or have reconstituted themselves as unregulated monopolies or capitalist trusts.

In the successor States, the first order of economic business seemed at times to be capturing the property of the former Union, exchanging claims and counterclaims, and introducing restrictions on exports. Decisions on economic reform and normalization of production and distribution on their sovereign territories have been harder to make. Lack of agreement between newly independent States and in legislative and executive bodies on vital issues such as tax collection, currency, property, inter-republic trade and privatization have delayed reforms and contributed to the general economic disarray. This, in turn, reinforced aspirations of individual republics (and even localities) to barricade themselves from the economic decline in their erstwhile partners and to try to "go it alone". But, given the integrated nature of the former Soviet economy, no partner could achieve this without dislocating all others.

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[27] See Giovanni Andrea Cornia and Sándor Sipos, eds., *Children and the Transition to the Market Economy: Safety Nets and Social Policies in Central and Eastern Europe*, Study by UNICEF (Aldershot, Avebury, 1991).

The process of disintegration in 1991 was particularly pronounced in the budgetary area. Even before the dissolution of the Union, the republics had failed to make expected payments to the central budget: for the first nine months of the year actual payments were only 45 per cent of the plan. The central Government budget deficit for the same period was nearly 90 billion roubles.

One major cause of the deficits was the proliferation of social entitlement programmes that were promulgated by elected bodies at all levels without any regard to the availability of funds. The Union-level programmes alone carried 1991 authorizations of 50 billion roubles, the same amount in nominal terms as for the whole of the preceding decade.

For the year as a whole, the consolidated budget deficit reached 300 billion roubles (including Union, Republic and extrabudgetary funds), or nearly 18 per cent of GNP compared to 1.8 per cent in 1985. Budget deficits of such magnitude could only be financed through money creation, which accelerated as the year progressed. Although 3.4 billion roubles were withdrawn from circulation in the first quarter in a confiscatory manner, 25 billion and 49 billion roubles, respectively, were added to the money supply during the second and third quarters. In October alone the money supply rose by 12 billion roubles. As a result, the total amount of money creation from January to October was 4.5 times larger than in the corresponding period of 1990.

Another perspective on the inflation was the rapid expansion of credit made possible by very liberal lending policies of both State and commercial banks. During the first nine months of 1991 the amount of credit disbursed by the banks grew almost 70 per cent. In the Russian Federation, bank credit grew 1.8 times. The structure of lending was indicative of the inflationary spiral that was gathering steam: 86 per cent of credits were short-term, used by enterprises to cushion the effects of higher prices for energy, raw materials and other capital goods and, generally, to avoid the pain of adjustment to a rapidly changing economic environment.

Thus, at the same time as the Government at all levels was starved for funds, the cash flow of enterprises and organizations grew. During the first nine months of 1991, the profits from operations of enterprises increased 80 per cent compared to the same period of 1990, primarily through price increases for their products. Much of the increase in profits went into social expenditures and bonuses for employees and little of it to long-term investment.

The ability of firms to raise prices was testimony to the high degree of monopoly in various sectors.[28] The idea had been to encourage the enterprises to raise production by making it more profitable. But with supply lines disrupted, extreme uncertainty about the distribution network and risk-averse management, producers only inflated the prices for their products and services instead of increasing their output.[29] Even agricultural goods, which were widely presumed to be hoarded by producers in anticipation of higher prices in early 1992, failed to arrive in volumes sufficient to satisfy the demand and restrain further price hikes.

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[28] The overall degree of concentration of Soviet industry was also inordinately high. In 1991, for example, 7 per cent of industrial enterprises produced 65 per cent of aggregate industrial output and employed over 50 per cent of workers. ("Ob ekonomicheskom polozhenii strany v 1991 godu", *Goskomstat SSSR*, (Moscow, 1991), p. 41).

The general picture that emerges of enterprise behaviour in this environment is one of excessive and debilitating "short-termism". State enterprises are complex organisms whose top priority is survival and whose traditional habitat has been a bureaucratic State structure. Their behaviour may be a rational response to a very uncertain situation, but it could doom efforts to reverse the decline of production. Indeed, there has been a growing policy concern about enterprise performance under the new economic conditions, about job preservation in enterprises and about the lack of interest in investment.

An adequate supply response to market signals that result from rising prices will depend on the success of the ambitious measures for demonopolization and privatization that are planned for the remainder of 1992. Competition is needed to provide a healthy shock to existing management. Sometimes, however, risk-averse organizations require a different management to become more entrepreneurial. Sometimes bankruptcy, redistribution of assets and starting from scratch are required. All that can be said with certainty is that no simple, general prescription will suffice. Considerable experimentation in changing the State enterprise sector is warranted.[30]

For all the excitement about the appearance of non-State forms of property such as cooperatives, commercial banks, commodity exchanges, private stores, etc., the State still owns the productive economy. By the end of 1990, less than 5 per cent of fixed assets belonged to cooperatives and individuals.[31] Moreover, over 80 per cent of cooperatives were established by State enterprises to service their needs. Thus, more than four fifths of aggregate production of cooperatives was sold to the sponsoring State enterprises, and the share was close to 100 per cent in construction and research and development. In the beginning of 1992 in the Russian Federation, non-State enterprises (including individual proprietorships) owned less than 4 per cent of the Republic's fixed assets, and produced 14 per cent of the aggregate output.

In agriculture, the number of private farmers is growing rapidly, but from a tiny base. In 1991 [illegible] increased in the Russian Federation from 4,400 to 50,000 and by the beginning of February it had reached 75,500. However, the restrictions on ownership and sale of land remain a major obstacle, and the acreage used by private farmers was less than half of 1 per cent of the total agricultural area. On the average a private farm in Russia has 42 hectares of land, 4 cows, 3 pigs and 5 sheep. The share of private farmers in 1991 aggregate agricultural production in the Russian Federation was less than 1 per cent. Private farmers also suffer from lack of agricultural equipment, fodder and fertilizers. In Russia, for every 100 private farms there were only 47 tractors, 5 combines, 17 ploughs.

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[29] Already in 1990-1991, for example, many of the numerous, large enterprises in the Russian Federation cut their production volumes 10 to 30 per cent, at the same time increasing the average wholesale price for a unit of their products 2 to 4.5 times (*Gos. komitet...*, p. 5).

[30] In other words, different institutional forms might be appropriate in different sectors and require different time-frames and coincident expenditures to make the privatization-cum-transformation successful (see *Economic Survey of Europe in 1991-1992* (United Nations publication, Sales No. E.92.II.E.1), chapter 6).

[31] These are the latest composite figures available. However, no significant changes took place in 1991.

If the economic reform is to take hold, 1992 will have to be the year when privatization of State property begins in earnest. The Russian Government has stated its intention to have a substantial share of State assets privatized by the end of the year, though the procedures are yet to be finalized. But that is just one, albeit the largest, of the effective decision-making units in the former USSR. There are 15 successor States with a common inheritance of economic and social problems but with different political agendas (see box II.2). Moldova, Turkmenistan and Kyrgyzstan have already adopted relatively advanced national legislation on privatization and foreign investment.

The one inter-republic authority, the Commonwealth of Independent States, has not been accorded a coordinating mechanism of real significance or effectiveness. Vital economic agreements - including preservation of the rouble as the currency of the Commonwealth, at least for a transitional period, and of a "common economic space" - were all but abandoned. Former all-Union branch ministries, when retained at all or transformed almost intact into something called "combines" or "concerns", are for all practical purposes confined to the territory of the Russian Federation. Central economic bodies like *Gosplan* (the planning agency), or *Gossnab* (the resource allocation agency), were summarily disbanded as symbols of the discarded Union.

But none of these actions diminish the fact that the economy of the former Soviet Union was, and in many ways still is, a complex conglomeration of interdependent parts which demands at least a modicum of coordination and cooperation in economic policy. There are no clear-cut recipes for carving out viable national economies from the existing structure and, at the same time, carrying out their transition to market mechanisms.

A further complication is that the decision makers of the newly independent States have to reconcile solid national economic interests with powerful - if not always rational - sentiments of resurrected national identity and State independence. This is one area in which concessions to symbolism and political posturing could entail a high long-term price. In several major problem areas, considerations of long-term economic need have been overruled or hindered by political expediency.

At the same time there are certain encouraging signs of cooperation. An inter-State coordinating mechanism was created in February 1992 in the area of statistics, and a certain level of cooperation is maintained in customs services, transport and environmental protection. Progress lies in building on these successes.

Box II.2. Out of one, many: the USSR breaks up

The dissolution of the Soviet Union in 1991 into 15 independent republics was precipitated by a failing political and economic system that was unable to reform itself. It was largely a peaceful change, driven less at first by nationalist or ethnic fervour than out of frustration with the inability of the central Government to manage economic life. It gave rise to a diverse collection of independent States, all of which seek to build modern market institutions as their basic economic structures.

Although the new republics largely define themselves along ethnic lines, they have quite mixed populations. They have conventionally been grouped into three Slavic republics, three Baltic republics, Moldova, three Transcaucasian republics, and Kazakhstan and the central Asian republics (see table). Thus far, the republics maintain the borders they last had as constituents of the Soviet Union, albeit with some instances of conflict, notably in the Nagorno-Karabakh region of Azerbaijan, with its mainly Armenian population.

The new republics have inherited economies that are very diverse, reflecting their disparate origins and economic conditions before and during the existence of the USSR. To illustrate the diversity in size, the republics range from Armenia, with less than 30,000 square kilometres (km^2) of territory, to the Russian Federation, itself containing 16 autonomous republics and six autonomous regions with a total area of 17,075,400 km^2. While the Russian Federation is of continental proportions, economically diversified, and the world's largest petroleum producer, Armenia is land-locked, mainly a producer of agricultural and mineral commodities, and completely dependent on imports for hydrocarbon fuels.

Armenia was neither the smallest republic in terms of population (Estonia is) nor the poorest. Indeed, Armenia has the second highest life expectancy among the 15 countries, while the Russian Federation has almost the lowest life expectancy. By several measures, the central Asian republics are the least developed countries of the group.

All of the new republics can be characterized as middle-income or low-income countries. The former Soviet Union's average per capita output in the late 1980s was about the same as that of Poland, slightly less than in Hungary, about 25 per cent less than in Czechoslovakia and one third less than in the former German Democratic Republic.[a] By this measure, production per person in Estonia, Latvia and the Russian Federation would be slightly below the Czech and Slovak level.[b] At the other extreme lie the central Asian republics, with per capita output on the order, roughly, of half or less of the Soviet average. Indeed, the latter countries used to receive very considerable resource transfers from the other republics (again, see table). These transfers are not likely to be available again in the near term.

Until its dissolution, the economy of the USSR was developed and administered as a single, territorial complex, with what was perceived as "national" - meaning USSR - economic and security interests predominant. The industrial infrastructure, power grids, labour migration policy, and so on, all reinforced the unitary character of the complex. In many cases, unique industrial facilities were established in the territories of now-independent States to serve the whole of the country. Nobody - at least in the economic decision-making bodies - had ever seriously considered the possibility that the Union might break apart.

The successor States thus begin their lives with economies that are highly integrated with each other. Before the dissolution, the exports of Belarus, Moldova and the Baltic republics to other Soviet republics exceeded three fifths of their net material product. For the other republics, the comparable ratio was also quite high. The new republics will certainly now seek to diversify their trading partners, but, it may be hoped that they will not also unduly sacrifice intra-republic trade that would be viable with adequate mechanisms for trade promotion and finance (see chapter III).

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[a] Based on Secretariat estimates from national data for 1988.

[b] It should be emphasized that the measure is of production and not household consumption. In the Russian Federation, in particular, output included considerable production in the military sector.

The transition process to a market economy in these republics is likely to be even more difficult than the process that is already under way in eastern Europe. Unlike the eastern European countries, which adopted central planning after the Second World War, the former Soviet republics (except the Baltics) were under central planning for more than two generations. People in eastern Europe also had more contact with life in market economies than the citizens of the new republics.

Thus, while it had seemed obvious to think of the Soviet Union as a unitary economy, the diversity of the successor States is their most striking feature. International assistance efforts need to appreciate this diversity, expect the economies to evolve along several different lines and support multiple approaches to their transformation into market economies.

Economic characteristics of the former Soviet republics

	Population (million)	Land area (1,000 km²)	NMP per capita (percentage of Soviet average)	Infant mortality (per 1,000)	Life expectancy at birth (years)	Exports to other republics (percentage of NMP)	Net resource transfers (percentage of NMP[a])
Baltic republics							
Estonia	1.6	45.2	137.0	12.3	70.0	66.4	13.0
Latvia	2.7	64.6	131.2	13.7	69.6	66.1	4.1
Lithuania	3.7	65.2	106.5	10.3	71.5	61.1	5.0
Central Asian republics							
Kazakhstan	16.7	2 717.3	79.3	26.4	68.8	28.9	21.4
Kyrgyzstan	4.4	198.5	54.2	30.0	68.8	45.5	27.5
Tajikistan	5.4	143.1	39.0	40.7	69.6	46.0	20.3
Turkmenistan	3.7	488.1	56.2	45.2	66.4	49.7	8.2
Uzbekistan	20.7	447.4	44.9	34.6	69.5	39.7	14.7
Moldova	4.4	33.7	88.6	19.0	68.7	60.6	7.6
Slavic republics							
Belarus	10.3	207.6	113.4	11.9	71.3	64.8	-10.8
Russian Federation	148.5	17 075.4	119.8	17.4	69.3	18.2	-3.6
Ukraine	51.9	603.7	89.6	12.9	70.5	37.2	-0.9
Transcaucasian republics							
Armenia	3.4	29.8	82.0	18.6	71.8	52.2	8.7
Azerbaijan	7.1	86.6	58.9	23.0	71.0	58.1	-26.9
Georgia	5.5	69.7	78.2	15.9	72.8	56.4	-4.4

Source: UN/DESD, based on national sources (data for 1990, except exports to other republics and net transfers, which are 1989).

[a] A positive number is a net receipt of resources from elsewhere; a negative number is a net transfer to other countries (includes transfers *vis-à-vis* other republics and foreign countries). Data are rough estimates, calculated as the difference between NMP produced and utilized (as such, they are valued in domestic prices and include the statistical discrepancy).

Developing countries: slow growth once more

In 1991, overall economic growth in developing countries remained sluggish. It averaged about 3.4 per cent in 1991, about the same as in 1989 and 1990. There was also great diversity. In Latin America and the Caribbean, economic recovery is taking place in several countries and, after a virtual stagnation in 1990, the region showed a 2.6 per cent growth in 1991. On the other hand, there was not much change in growth in Africa. In the Mediterranean region, caught between the impact of the Gulf war and the war in Yugoslavia, growth collapsed. South and East Asia remained the fastest growing region in the world, as it was throughout the 1980s, but world recession and the consequences of the Gulf crisis for labour remittances, tourism and oil imports, affected the countries of the region in 1991 in various degrees. The result was a deceleration from 6.3 per cent in 1990 to 5.4 per cent in 1991 (table II.5).

There are large differences in the patterns of investment and rates of growth within the regions, which are highlighted in the analysis that follows, but there also is an identifiable convergence of growth performances, as table II.6 shows. The deceleration in 1991 is concentrated in the bracket of high growth. While 12 countries had attained growth of over 7.5 per cent in 1990, only 8 reached such levels in 1991. The decline was even sharper in the performance bracket of 5 to 7.5 per cent. This reflects developments in the newly industrializing countries and in the second generation of successful manufacture exporters in South and East Asia. At the other extreme, there were fewer countries with zero or negative growth in 1991 than in 1990. The number of countries in the moderate to slow growth bracket of 2.5 to 5 per cent increased.

Latin America: improved inflation and growth record

Economic growth in Latin America and the Caribbean was 2.6 per cent in 1991, marking a return to marginally positive per capita growth for the first time since 1987.[32] Also for the first time since 1987, all major and medium-sized countries experienced positive GDP growth. Inflation slowed down (see figure II.5), even in the three countries where it is still above 100 per cent per year, viz., Brazil, Peru and Nicaragua.[33] The net financial transfer to the region turned positive, reversing almost a decade of net outflow, and considerably increasing the availability of imports. The debt problem looks more manageable (see chapter IV).

During 1991, adjustment and stabilization efforts were finally successful in reducing inflationary pressures and improving fiscal balances in virtually all countries. Stability and sustainability in growth and macroeconomic performances appear to have improved on balance, although the achievements are still fragile, especially with respect to the external position and to the social acceptability of adjustment strategies which imply continuing sacrifices from the majority of the population.

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[32] Due to the deterioration experienced during the past decade, regional per capita GDP is still lower than in 1980 and equals its 1977 level.

[33] Inflation in 1991 was 466 per cent in Brazil, 186 per cent in Peru and 1,183 per cent in Nicaragua. Figures for 1990 were 1,585 per cent, 7,658 per cent and 13,491 per cent, respectively. See Economic Commission for Latin America and the Caribbean, *Preliminary Overview of the Economy of Latin America and the Caribbean, 1991*, table 5, p. 40.

Table II.5. Developing countries: rates of growth of gross domestic product, 1981-1992

(Annual percentage change)

	1981-1987	19[illegible]	1989	1990	1991[b]	1992[c]	Memo item: approximate share in 1991 world output
Developing countries[a]	2.9	4.4	3.3	3.2	3.4	4.5	16.6
Latin America and the Caribbean	1.5	0.7	1.1	-0.1	2.6	3.0	4.3
Energy exporters	1.3	3.1	0.7	4.2	4.4	4.0	1.6
Energy importers	1.7	-0.5	1.4	-2.4	1.6	1.5	2.7
Africa	1.8	2.3	2.7	3.1	3.1	3.5	1.6
Energy exporters	1.9	1.1	2.8	3.8	3.5	3.5	1.1
Energy importers	1.8	4.6	2.7	1.9	1.7	3.0	0.6
West Asia	-2.0	-0.5	2.3	1.6	0	4.0	2.1
South and East Asia	5.5	8.5	6.1	6.3	5.4	5.5	5.5
China	9.7	10.9	3.6	5.2	7.0	7.0	2.4
Mediterranean	3.0	1.3	1.0	1.1	-7.0	2.5	0.6
Memo items:							
15 heavily indebted countries[d]	1.3	1.2	1.3	-0.3	1.3	2.5	4.7
Sub-Saharan Africa (excluding Nigeria)	1.8	2.9	2.1	1.3	0.7	2.0	0.5
Major developing economies							
Brazil	2.3	0.1	3.2	-3.8	1.0	1.0	1.7
India	4.7	9.6	5.2	5.0	2.5	3.5	1.5
Korea, Republic of	8.3	11.5	6.1	9.0	8.6	7.0	1.1
Mexico	1.1	1.4	3.1	3.9	3.6	4.5	0.9
Iran (Islamic Republic of)	2.3	-2.0	1.0	10.0	5.5	6.0	0.9
Taiwan Province of China	8.2	7.3	7.6	5.0	7.2	7.0	0.6
Indonesia	3.9	6.5	7.4	7.4	5.8	6.0	0.5
Saudi Arabia	-3.9	6.4	1.2	9.0	11.6	2.0	0.5
Argentina	-0.7	-2.8	-4.6	-0.2	4.5	4.0	0.4
Turkey	5.4	3.4	1.1	9.2	2.0	4.0	0.4
Thailand	5.3	13.2	12.2	10.0	8.0	8.5	0.4

Source: UN/DESD.

[a] Covers 92 countries that account for 98 per cent of the population of all developing countries.

[b] Preliminary estimate.

[c] Forecast.

[d] Countries in this group are: Argentina, Bolivia, Brazil, Chile, Colombia, Côte d'Ivoire, Ecuador, Mexico, Morocco, Nigeria, Peru, Philippines, Uruguay, Venezuela and Yugoslavia.

Table II.6. Developing countries: frequency distribution of rates of growth of output, 1983-1991[a]

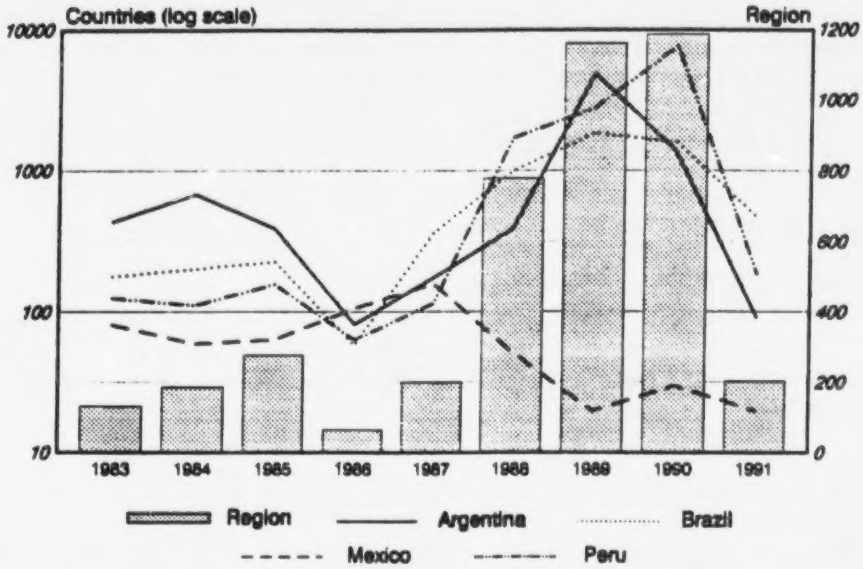
	1983	1984	1985	1986	1987	1988	1989	1990	1991	Population of countries 1990 Number (million)	Population of countries 1990 Percentage of total	Population of countries 1991 Number (million)	Population of countries 1991 Percentage of total
Zero or below	35	28	27	20	25	20	18	21	18	356	12.4	351	11.9
0.1 - 2.5 per cent	17	15	17	15	15	18	20	15	23	451	15.7	691	23.5
2.6 - 5.0 per cent	16	20	28	26	29	20	27	30	35	1 539	53.6	1 607	54.7
5.1 - 7.5 per cent	15	16	11	20	12	21	19	13	7	310	10.8	69	2.3
7.6 per cent and over	8	12	8	10	10	12	7	12	8	216	7.5	222	7.5
Total	91	91	91	91	91	91	91	91	91	2 872	100.0	2 940	100.0

Source: UN/DESD. The data on population and population growth rates are those published by the Department in World Population Prospects 1990 (United Nations publication, Sales No. E.91.XIII.4).

[a] Based on data for 91 countries that account for 98 per cent of the population of developing countries in 1991, excluding China.

Figure II.5. Latin America: consumer price indexes, 1983-1991

(Percentage change, December to December)



Source: UN/DESD and ECLAC.

Growth performances were mixed, as the countries are going through different stages of economic reform programmes which are themselves quite different, although most of them share an inclination towards free markets, trade liberalization and a reduced role of the State in the economy. The highest output growth, 9 per cent in Venezuela, was made possible by higher output and price of oil. In Mexico and Chile, growth in the 4-5 per cent range was essentially due to consolidation of successful adjustment policies while in Argentina a rebound from severe depression led to similar rates of growth. In ten countries GDP growth roughly equalled population growth, or 2 to 3 per cent. Persistent external and domestic disequilibria restricted growth to marginal levels in four countries (Brazil, Costa Rica, Honduras, Nicaragua) and to virtual stagnation in the Dominican Republic. Only Cuba and Haiti suffered dramatic declines in economic activity, due in both cases to exceptional exogenous shocks.

Improved fiscal balance

Restoration of fiscal balance is increasingly recognized as essential to macroeconomic policy in Latin American countries. The burden of the fight against inflation has been put on fiscal policies and an array of measures aimed at curtailing real wages in the formal sector. During 1990-1991, fiscal austerity intensified, and deficits have been reduced substantially in many countries.[34] Efforts to restore the fiscal balance have involved postponement of essential public expenditures and privatization of State enterprises, generating a once-and-for-all increase in government revenue. Privatization, often linked to foreign debt buy-backs and debt-equity swaps, has gained momentum. In Brazil, the sale of the steel company Usiminas and of three other heavy industrial enterprises in late 1991 brought more than $1.2 billion. Argentina opened to foreign investors sectors traditionally considered State monopolies, such as electricity, telephones and oil. In Peru, the divestment of 200 State enterprises was authorized in September. The scale of privatization was particularly large in Mexico, where in 1991 alone the sale of various enterprises in the steel and banking sectors generated receipts of several billion dollars.[35]

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[34] In Mexico, for instance, the budget deficit, which had peaked in 1986-1987 at more than 13 per cent of GDP, underwent a drastic reduction in the late 1980s and gave way to a surplus in 1990 and 1991.

Large improvement in net transfer of resources

The rapid growth in export revenues in previous years gave way to stagnation in 1991, owing to recession in the industrialized countries, and also to increased domestic absorption in some countries. The volume of imports surged by 16 per cent, fuelled by the recovery in economic activity and by trade liberalization.[36] The trade surplus fell by more than 50 per cent for the region as a whole, but this was more than compensated by an improvement in the capital accounts.

International interest rates declined, easing the burden of the debt service. The reduction in interests due on Latin American debt contracted at floating rates was around $4 billion. The large differential between domestic and international rates and an overall improvement in investors' confidence contributed to a surge in private capital inflows into the region and to a return of capital exported in earlier years. Net capital inflows doubled their 1990 level to $34 billion, while net payments of profits and interests declined to below $30 billion for the first time in ten years. As a result, the net transfer of financial resources to Latin America turned positive for the first time since 1981, exceeding $4 billion.[37] This shift was due to developments in Mexico, Venezuela and Argentina. Mexico's capital account surplus was almost $20 billion in 1991. A large portion was directed towards the stock market, but direct investment and short-term financial flows were also important. Net transfers to Venezuela turned positive, and net capital outflows from Argentina decreased.[38]

This rapid inflow of capital, partly due to conjunctural circumstances rather than long- or medium-term investment decisions, is not an unmitigated blessing. Central Banks increased their foreign exchange reserves, and were not always able to neutralize the corresponding expansion of money supply. The extra liquidity that was the counterpart of the rapid increase in foreign reserves did run counter to the predominantly restrictive monetary policy of countries where inflation still runs high. At the same time, where capital flows shifted rapidly the currency appreciated in real terms, as in Argentina, Chile and Mexico. Combined with trade liberalization, currency appreciation is leading to a rise in imports much faster than in exports, which is sustainable only if there is a continued net inflow of capital.

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[35] Also Cuba modified its foreign investment policy to attract joint ventures in tourism, biotechnology and selected manufacturing subsectors, mainly in the form of shareholding.

[36] For the changes in trade policies, see chapter III.

[37] This figure refers to the net capital inflow minus net payments of profits and interests. See chapter IV of this *Survey* on the world-wide transfer of resources.

[38] In Brazil inflows of capital accelerated later, in the last months of 1991 and first quarter of 1992, more than doubling foreign exchange reserves in six months to $15 billion.

Africa: broadening the adjustment

The growth of output in Africa was around 3 per cent in 1991, less than population growth. For the second consecutive year, the energy-exporting countries performed significantly better than the energy-importing countries. Growth in the energy-importing countries was less than 2 per cent in 1991, half the rate for the oil-exporting countries.

Economic performance in 1991 was affected by the events in the Gulf which had an impact on export and government revenues in oil-exporting countries and on tourism and oil import prices in oil-importing countries.[39] During the second half of 1991, however, the effects of the Gulf crisis had subsided. Energy prices fell and tourism rebounded in Egypt, the Gambia, Ghana, Kenya and Mauritius. In Egypt, Suez canal revenues almost doubled in 1991 and workers' remittances were far higher than expected. In the Sudan, on the other hand, the loss of workers' remittances continues to be felt. As terms of trade continued to deteriorate, Africa's export revenues did not increase despite a nearly 4 per cent increase in their volume.

Total food production in Africa increased by 14 per cent in 1991, although agricultural output was curtailed by civil strife, notably in Mozambique, Rwanda, Sierra Leone, Somalia and the Sudan, and by drought in some areas in eastern and southern Africa. In countries with more normal weather, for example, Mozambique, the United Republic of Tanzania and Zambia, agricultural production continued to suffer from lack of credit, poorly developed marketing, distribution, and transportation systems, inadequate extension services, and untimely delivery of fertilizers and seeds. Maize output in Zambia suffered from low producer prices, forcing the country to import maize.

A large number of countries continued to pursue programmes of economic reform, but their effects on investment and growth are still disappointing. Despite modest results in some areas, a conclusive empirical assessment is not yet available. This is partly because the assessments are difficult to compare, owing to limited information on the methodology. Neither do adjustment programmes of individual countries have the same starting point. For many countries, too little time has elapsed since the adoption of structural adjustment measures. Statistical data are inadequate in particular in economies in which the subsistence factor is still very large. And political reform aimed at greater pluralism has brought changes to the implementation of economic reform programmes.[40]

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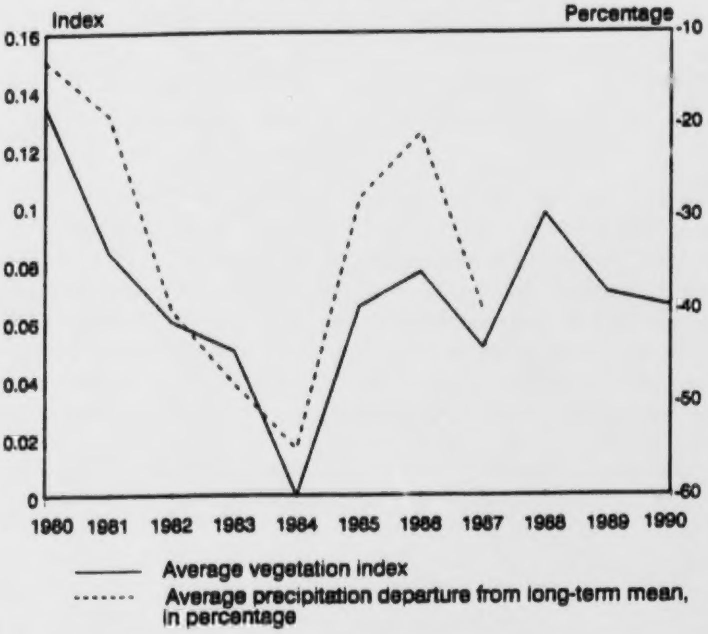
[39] The effects of the Gulf crisis on the economic performance in Africa were analysed in *World Economic Survey, 1991* (United Nations publication, Sales No. E.91.II.C.1).

[40] See, for instance, Riccardo Faini, Jaime de Melo, Abdelhak Senhadji and Julie Stanton, "Growth-oriented adjustment programs: a statistical analysis", *World Development*, vol. 19, No. 8 (August 1991), pp. 957-967; Carol Lancaster, "The political economy of economic reform: focus on sub-Saharan Africa", United Nations Committee for Development Planning, twenty-eighth session, November 1991, pp. 14-20; Howard Stein, "Deindustrialization, adjustment, the World Bank and the IMF in Africa", *World Development*, vol. 20, No. 1 (1992).

Box II.3. Desertification: short- and long-term factors

Droughts have occurred in Africa, as in other parts of the world, for centuries. However, their incidence has increased during the last two decades. In almost all years since 1970, rainfall in the Sahel has been below the average of this century. A recent study calculated for the 1980s an average annual vegetation index for the Sahel which displayed a close correlation between precipitation and vegetation (see figure).[a] An interesting aspect of these data is that the vegetation index, and with it the extent of the desert, quickly rebounded after 1984, the driest year in this century. The study estimates that the Sahara desert and the Saharan-Sahelian transitional zone expanded from 8,633,000 km^2 in 1980 to 9,269,000 km^2 in 1990. During the 1980s, it fluctuated following closely the oscillation of the vegetation index. In 1990 the mean position was 130 km south of its position in 1980, but this movement varied greatly across the continent. Variation was high from Mali through central Niger and from eastern Chad through western Sudan. Variation was however low in southern central and south-eastern Mauritania, from central Niger through western Chad, and in eastern Sudan and northern Ethiopia. These data cannot, however, measure desertification which is currently understood to mean sustained land degradation in arid, semi-arid, and dry sub-humid areas resulting from adverse human impacts.[b]

Average vegetation index and precipitation in the Sahel



Source: UN/DESD, based on Compton J. Tucker, Harold E. Dregne and Wilbur W. Newcomb, "Expansion and contraction of the Sahara Desert from 1980 to 1990", *Science*, vol. 253 (19 July 1991), pp. 299-301.

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[a] Basic data are from Compton J. Tucker, Harold E. Dregne and Wilbur W. Newcomb, "Expansion and contraction of the Sahara Desert from 1980 to 1990", *Science*, vol. 253 (19 July 1991), pp. 299-301. The vegetation index is calculated from data sensed by satellites in the red and near-infrared spectral regions.

[b] See "Protection and management of land resources; combating desertification and drought", report of the Secretary-General of the Conference, Preparatory Committee for the United Nations Conference on Environment and Development (A/CONF.151/PC/62, 26 July 1991), p. 3.

Desertification is not a function of rainfall alone. A combination of drought and structural factors is at work. In situations where short-term subsistence is at stake and uncertainty and risk prevalent, cultivation or grazing practices that are environmentally damaging become, in practice, inevitable. Poverty induces a high rate of discount of future costs of current use of resources. Precautionary measures are taken to cope with uncertainty and risk associated with weather, markets and policies. Real assets (land, livestock, grain and household items) are saved, production and income are diversified. Land is left fallow to recover its fertility. But the long periods of below-average rainfall have caused a decline in the resilience of the ecosystem and have exhausted traditional insurance mechanisms. There are few possibilities left to sell non-productive (small livestock, jewelry) or productive assets (livestock, tools, land), to change grazing, cropping and planting practices or to collect wild foods. Dissaving of the environment is the result.

This process is aggravated by population pressure.[c] Larger populations lead to a higher demand for land, shorter fallow periods, use of marginal land, improper irrigation methods and a higher demand for fuelwood. The effects are overgrazing, trampling, overcultivation, waterlogging, salinization, alkalinization, cutting of vegetation and deforestation. These factors make the natural resources more vulnerable to the sun and to water and wind erosion, and finally lead to desert-like conditions.

There are few signs that the fundamental causes of land degradation have been relieved. Poverty in rural areas in Africa is still pervasive, little progress has been made in the creation of rural off-farm employment, and population growth rates are still high. The decrease in commodity prices during the 1980s has only aggravated the problem. Population growth rates are expected to decrease in the 1990s, although slowly, for the first time since the 1950s.[d]

Some measures have been taken to control desertification by attacking the direct cause, namely poor land use. However, effects are only recognizable after some time. Awareness of the problem has increased significantly, national plans for resource management have been written and popular participation has improved. The demand for fuelwood has been reduced by increased use of fuel-efficient stoves and the supply has increased as a result of afforestation projects, for example in Burkina Faso, Ethiopia, the Niger, Senegal and the Sudan.[e]

The demand for fuelwood has been reduced by increased use of fuel-efficient stoves and the supply has increased as a result of afforestation projects, for example in Burkina Faso, Ethiopia, the Niger, Senegal and the Sudan.[f]

Proposals for the action plan to be adopted at the United Nations Conference on Environment and Development in June 1992, contain sections on measures to be taken to control desertification and rehabilitate degraded land, including strengthening the knowledge base, developing information and monitoring systems, afforestation and reforestation, eradication of poverty, and promotion of alternative livelihood systems.

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[c] See Charles Perrings, "Incentives for the ecologically sustainable use of human and natural resources in the drylands of sub-Saharan Africa: a review", *World Employment Programme Working Paper*, No. 219 (Geneva, International Labour Office, July 1991); and Robert Repetto and Thomas Holmes, "The role of population in resource depletion in developing countries", *Population and Development Review*, vol. 9, No. 4 (December 1983), pp. 609-632.

[d] Kenya, for example, which has one of the highest population growth rates in Africa, announced in April 1991 that the results of the 1989 census point to a reduction of the population growth rate to 3.3 per cent per year from somewhat below 4 per cent 10 years ago.

[e] "Situation of countries stricken by desertification and drought in Africa", report of the Secretary-General (A/46/268-E/1991/107, 1 July 1991); and United Nations Sudano-Sahelian Office, "Drought and desertification in the context of the United Nations Programme of Action for African Recovery and Development (UNPAAERD) 1986-1990".

[f] "Situation of countries stricken by desertification and drought in Africa", report of the Secretary-General (A/46/268-E/1991/107, 1 July 1991); and United Nations Sudano-Sahelian Office, "Drought and desertification in the context of the United Nations Programme of Action for African Recovery and Development (UNPAAERD) 1986-1990".

Continuing instability

Civil strife continued to obstruct economic activity in several countries in 1991, although in Angola, Ethiopia and Liberia major hostilities have ended. Given the length and intensity of these conflicts, their effects will persist. For Angola it is estimated that 70 per cent of the roads are unusable because of mines and poor conditions and that other infrastructure is scarce or non-existent.[41] Reconstruction, demilitarization, mine clearing and resettlement of refugees and internally displaced persons will require a large effort. In Liberia, peace talks have progressed and a main rebel group has agreed to disarm. Production of minerals, tobacco and rubber has picked up. Fighting caused major disruption in the most fertile and mineral-rich areas of Sierra Leone. In Rwanda, war has disrupted agricultural production and tourism. Burundi also suffered from the war in Rwanda through higher transportation costs. In Zaire, political instability and the deteriorating law and order situation have led to an exodus of many citizens and expatriate skilled labour. Coupled with the deterioration in mining, manufacturing and infrastruture, this will have long-term effects on the economy of the country. In Somalia, destruction and loss of human life have been massive and the harvest has probably fallen to 40 per cent of the normal level. Distribution and food aid efforts were seriously impeded by hostilities.

In Ethiopia, Mozambique and the Sudan precipitation was very uneven, with poor rainfall in some areas and heavy rains and flooding occurring in others. In Ethiopia and the Sudan, agricultural production increased in 1991, but was still below requirements. Famine conditions exist, especially among displaced persons, in Ethiopia, Mozambique, Somalia and the Sudan. In Angola and Zaire, food shortages exist in urban areas. Across Africa, famine threatens approximately 34 million people, of which about 9 million each are in Ethiopia and the Sudan and some 4.5 million in Somalia. In eastern and southern Africa, insufficient or irregular rainfall has resulted in below-average crops and even food emergencies. At the beginning of 1992 drought conditions were worsening in southern Africa. Zimbabwe is facing a second year of drought which is having a devastating effect on the economy and its structural adjustment programme introduced in March 1991. Lesotho has appealed for food aid, and Kenya is to import food in 1992 for the first time since 1980-1981. In western Sahel, poor rain and locusts infestations curtailed harvests, but Burkina Faso, Chad, Mali and the Niger all achieved record harvests of cereals. In northern, western and central Africa agricultural output is in general near or above normal due to good weather.

Inflation

Inflation accelerated during 1991. The consumer price index for the region increased by about 19 per cent in 1991, after about 15 per cent in 1990. Inflation was in four digits in Zaire by the end of 1991, and in double digits in Angola, Uganda, Zambia and Zimbabwe. However, among the members of the Franc Zone, inflation was modest and slowing down. Energy prices fell in some countries in the second half of 1991, easing inflationary pressure. In others, civil strife and drought have contributed to high inflation, as in Liberia, Mozambique, Sierra Leone, Somalia, the Sudan and Zaire. In other countries, inflationary pressures were high due to large devaluations, as in Algeria and the Sudan, price liberalization, as in Egypt and Zimbabwe, increases in tax rates and wage increases, as in Togo. Because food takes up about half of household expenditures in many African countries, food shortages, reduction of food subsidies and food price liberalization have a large impact on consumer prices. Drought and food shortages in particular contributed to inflation in east African countries such as the United Republic of Tanzania and Zimbabwe. In Ghana and Nigeria, inflation declined in 1991 as a result of increased agricultural output.

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[41] "Report of the Secretary-General of the United Nations Angola Verification Mission II (UNAVEM II)" (S/23191, 31 October 1991).

Fiscal adjustment

In the 1980s, government deficits were generally between 4 and 6.5 per cent of GDP, with a range from surpluses of over 20 per cent of GDP in Botswana to deficits of more than 20 per cent in Guinea-Bissau. There is no clear overall trend. However, some countries have been able to improve their fiscal position markedly during the 1980s, among them Botswana, Ghana and Mauritius. Many countries have implemented policies to reduce the budget deficit by privatizing State-owned enterprises, by increasing tax revenues or by reducing payroll expenditures.

Reduction of payrolls has often been difficult. In various countries in Africa, real salaries of civil servants have declined drastically. Sometimes Governments have found it difficult to pay salaries on time. Benin, the Central African Republic, Chad, the Congo and the Niger faced this problem in 1991. Delays in payments to soldiers in Zaire was one of the causes of the looting in September and October 1991. In some countries, such as Angola, Botswana, the Central African Republic, Guinea, Senegal and Zimbabwe, strikes broke out in support of wage demands. These demands were often impossible to meet without impairing the fiscal targets of stabilization programmes put in place with the support of the Bretton Woods institutions. Some countries, among others Angola, Gabon, the Gambia, Guinea, Lesotho, Mali, Togo and Zaire were thus impelled to increase pay in 1991, but Cameroon did cut fringe benefits. As an alternative to reducing pay, the number of civil servants could be cut. However, this has not always been a guarantee for reduction of expenditures - unless non-existent workers are on the payroll - because severance pay and pensions can be substantial, as was the case for example in Guinea and with the Cocoa Marketing Board in Ghana.[42] In 1991, Madagascar and Sierra Leone cut the number of government employees and Benin and Zimbabwe announced their intention to do the same. The number of employees was frozen in Angola, Kenya and Mozambique.

Programmes of economic reform may themselves lead to reduction in government revenue in the short term. For example, almost all countries in Africa depend on tariffs for at least a quarter of total government revenue, and trade liberalization can lead to declining revenues from this source.

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[42] Robert Klitgaard, "Incentive myopia", *World Development*, vol. 17, No. 4 (April 1989), pp. 447-459.

Box II.4. Consequences of integration of South Africa with the African economy

The political changes taking place in South Africa will change the role of the country in Africa, in particular in the southern region of the continent, and will have important consequences, both for the economy of the country and for the African economy.

The size and the stage of development of the South African economy make this a challenge and an opportunity for the other countries of the continent: in 1989 South Africa accounted for about 22 per cent of total GDP, 29 per cent of the total merchandise exports, but only 6 per cent of the population of the continent. It accounts for about one third of the manufactured output of the continent and has the potential to become a large supplier of capital and technology-intensive goods to the rest of Africa.

The financial sector is integrated with world financial markets, and South Africa is likely to become the financial centre of Africa in the future. It also has scientific and educational resources that could make it an important growth pole for the continent. The country's large market should attract labour-intensive manufactures from other African countries which would also be able to export a variety of agricultural commodities, oil, water and hydroelectricity to South Africa.

Currently, the percentage of officially reported trade between South Africa and the rest of Africa is small. During the 1980s, about 4 per cent of South Africa's exports went to other African countries and 2 per cent of its imports was of African origin.[a]

Interdependency in southern Africa is, however, in several ways more important than these figures suggest. First of all, trade sanctions against South Africa created a mutual interest in keeping trade unreported, and the figures are no doubt lower than actual trade. Secondly, such as they are they suggest that a third of South African manufacturing exports went to other African countries.[b] Moreover, exports to South Africa constitute a large share of the latter's total exports. The 10 countries in the Southern African Development Coordination Conference (SADCC) import about five times more from South Africa than from each other. They export about twice as much to South Africa as they export to each other.[c] Moreover, the bulk of foreign trade of the land-locked countries is routed through South African ports. Apart from considerations of geography, this trade owes much to past sabotage of neighboring countries' transport systems as well as to the higher reliability and the lower costs of the South African ports which offer containerization and more frequent departures of ships to Europe.[d]

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[a] The official trade figures of South Africa, which are published by the IMF, do include the trade of Botswana, Lesotho, Namibia and Swaziland (the members of the Southern African Customs Union). Trade among these five countries is therefore not included in the export and import figures of these countries.

[b] Carole Cooper, Colleen McCaul, Robin Hamilton, Isabelle Delware, John Gary Moonsamy and Kristine Mueller, *Race Relations Survey 1989/90* (Johannesburg, South African Institute of Race Relations, 1990).

Another factor of interdependency is workers' remittances. South African mines have always employed hundreds of thousands of migrants from neighbouring countries, although the number of these workers has diminished since the mid-1970s.

Direct investment between the countries in the region is still another aspect of interdependency. South African mining companies have long dominated mining operations throughout southern Africa as well as in other countries in Africa. South African companies also own manufacturing firms in several neighbouring countries, such as Mozambique and Zimbabwe.

These regional relations will probably be boosted by the end of apartheid and lifting of sanctions. The first signs are already there. Trade of South Africa with the rest of Africa increased by 40 per cent in 1989 and 22 to 30 per cent in 1990. This might be partly a statistical illusion if leakages to the embargo existed. Yet, about ten new South African trade missions have been opened in the recent past, and the establishment of a regional trade bloc has been discussed between South African businessmen, anti-apartheid leaders and officials from SADCC and PTA (Preferential Trade Area for Eastern and Southern Africa).[e]

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[c] Robert Davies, "A statistical profile of the SADCC countries in the 1980s", *Southern African Perspectives, Working Paper No. 3,* Centre for Southern African Studies of the University of Western Cape, South Africa (December 1990).

[d] Oliver S. Saasa, "The South African factor in the SADCC transport and communication systems", University of Zambia, paper presented to the Conference on Southern Africa into the 1990s, Johannesburg, 14-19 April 1991.

[e] "Interim report of the Special Committee against Apartheid", (A/AC.115/L.675, 10 June 1991); and *Africa Recovery*, vol. 5, No. 1 (June 1991), p. 5.

Foreign debt service, high real interest rates and terms of trade are important determinants of government deficits. The decline of commodity prices during the last decade had a depressing effect on export tax revenue. In the Central African Republic, Namibia and the Niger weak commodity prices reduced government revenues in 1991. Other exogenous determinants of government revenue were internal disturbances and wars which reduced tax collection and increased government expenditure in Ethiopia, Mali and Sierra Leone.

African Governments have attempted to raise revenues by adjusting the tax rates, widening the tax base, changing the structure of the tax system or improving collection. Kenya, in January 1991, replaced the sales tax with a value-added tax (VAT), and in the 1991/92 budget the rate was increased and the base widened. Egypt introduced a new sales tax in 1991, which is expected to raise government revenues; it also improved collection and reduced price subsidies on energy. However, since slow growth reduced tax receipts, it may prove hard for Egypt to meet the budget deficit target of 10.3 per cent of GDP for 1991/92. Among other countries which took measures to change tax rates and improve collection were Angola, Benin, Cameroon, the Congo, the Gambia, Guinea, Mauritania, Senegal, the United Republic of Tanzania, Uganda, Zambia and Zimbabwe.

West Asia: the aftermath of war

The economic situation in the region in 1991 was marked by the Gulf war. Output plunged in the war-devastated economies of Iraq and Kuwait but rose in other major energy-exporting countries. Loss of trade, tourism and workers' remittances in the aftermath of the war caused great difficulties for energy-importing and poorer countries. The combined gross domestic product of the region declined.

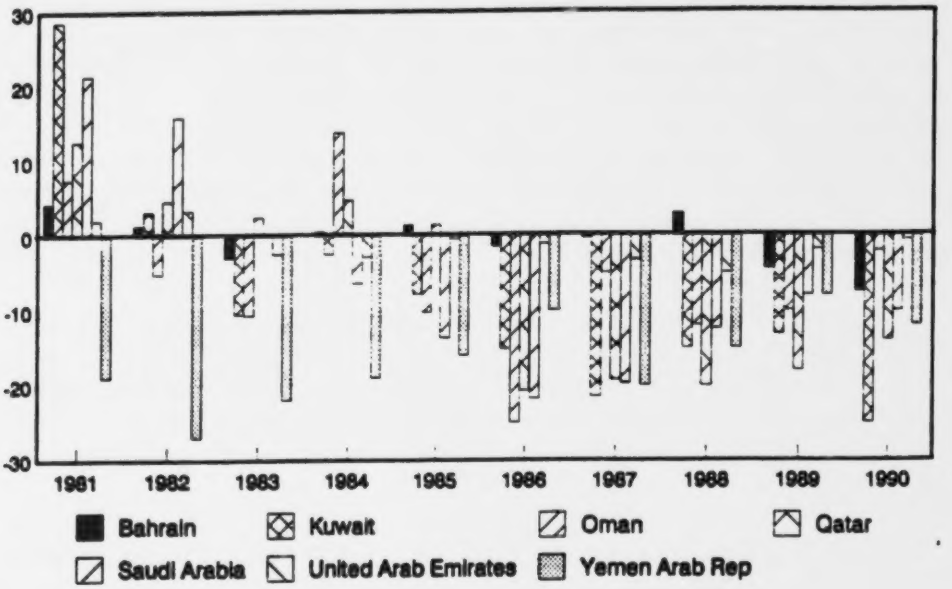
Although oil output expanded in 1991, output in other sectors declined. Most of the decline occurred early in the year and economic activities recovered after the end of hostilities. In most countries, output was affected by the massive departure of foreign workers at the outbreak of the crisis. Construction slowed down and many projects scheduled for 1991 were delayed. Air transport and shipping were badly affected by the war. In some countries, other services were also affected: some banks stopped operation, and hotel occupancies and retail sales declined as foreigners left the region.

Almost all countries in the region faced increased budget deficits owing to an unprecedented rise in government outlays (see figure II.6) In many countries much of this was war-related spending, but others had to cope with rising spending on social services, owing to a massive influx of returnees or refugees. To finance the budget deficits, most countries borrowed domestically and externally. The Saudi Government, for the first time in 20 years, raised a syndicated loan of around $4.5 billion in the international capital market. It also raised a $2.5 billion loan from the local banking system.

Despite increased government spending, inflation in energy exporting countries remained relatively low, the major exceptions being the Islamic Republic of Iran, Iraq and the Syrian Arab Republic. By contrast, consumer prices increased on the average by over 20 per cent in the net energy-importing countries.

Figure II.6. West Asia: budget balances in selected countries, 1981-1990

(Percentage of GDP)



Source: UN/DESD, based on *Survey of Economic and Social Development in the ESCWA Region in the 1980s* (United Nations publication, Sales No. 90.II.L.2), table 7.2 and other national and international sources.

The external balance of most countries worsened in 1991. The volume of oil exports increased with expanded oil production, but their value was 11 per cent lower than in 1990. Non-oil exports contracted, due partly to the importance of aluminium, which fetched lower prices. In the major countries of the region, there were heavy outflows of official transfers, mostly related to war commitments. Private transfer payments increased owing to the massive transfer of savings by the departing foreign workers. As a result, the region's current account deficit widened in 1991.

Soon after the war, most countries turned their attention to accelerated implementation of infrastructural and industrial projects which had been delayed by the Gulf crisis and the war. With the oil sector providing only limited scope for further expansion, the emphasis was on the development of other sectors such as aluminium, light industry and services. A major aim of long-term policy has been to attract foreign investment in these sectors and to this end many countries have revised their ownership regulations. Wholly foreign-owned companies are now allowed in Bahrain. The Islamic Republic of Iran passed new legislation allowing up to 49 per cent foreign ownership in joint ventures. In May 1991, the Syrian Arab Republic passed a new investment law to promote foreign participation.

The Iraqi collapse

The war, United Nations sanctions and internal conflicts inflicted heavy damage on the Iraqi economy. The total output of the economy in 1991 was probably 50 per cent lower than its 1990 level. The closing of many industries caused widespread layoffs. This, combined with dwindling employment opportunities in the public sector and demobilization, led to increased unemployment. A large proportion of the population fell back on the informal sector which expanded rapidly. Inflation reached over 1,000 per cent in 1991, and real earnings and incomes sharply declined. The disruption of electricity hampered water purification and sewage treatment in urban areas, causing a rise in the incidence of cholera, typhoid, dysentery and gastroenteritis.

Agricultural output in 1991 was probably around 30 per cent of the previous year's bumper crop, despite a reported 50 per cent increase in the cultivated area.[43] This drastic reduction was caused mainly by an acute shortage of inputs, such as fertilizers, pesticides, seeds, and spare parts for agricultural machinery, a complete breakdown of the irrigation system and poor rainfall in the north of Iraq. Livestock output declined by 50 per cent due to shortages of fodder and veterinary services.[44]

Industrial production may have dropped by around 50 per cent[45] as some industries were damaged by air attacks during the war and others faced shortages of water, electricity, raw materials and spare parts. The pharmaceutical industry ceased to function, owing to shortages of inputs.[46] Chemical and fertilizer plants were destroyed by allied attack because of their potential for chemical weapons manufacture. As a result, chlorine and aluminium sulfate were no longer available for water purification.[47] Oil-refining plants were severely damaged by bombing. Oil output declined sharply, at first adversely affecting transportation and power generation. By the end of the war, only two of the country's power stations, generating less than 4 per cent of Iraq's pre-war output, were in operation.[48] Iron and steel plants also suffered serious damage during the war. Construction activities were slow to recover after the war, as the shortage of raw materials persisted.

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[43] Letter dated 15 July 1991 from the Secretary-General addressed to the President of the Security Council, *Report to the Secretary-General dated 15 July 1991 on humanitarian needs in Iraq, prepared by a mission led by Sadruddhin Aga Khan, executive delegate of the Secretary-General* (S/22799), p. 33. See also Jean Drèze and Maris Gardar, *Income and Economic Survey in Health and Welfare in Iraq after the Gulf Crisis*, International Study Team (October 1991), p. 14-15.

[44] Security Council document S/22799, p. 33-34.

[45] Jean Drèze and Haris Gardar, *Income and Economic Survey*, p. 17.

[46] Security Council document S/22799, p. 25.

[47] Ibid., p. 20.

[48] Harvard Study Team, *Public Health in Iraq after the Gulf War*, mimeo, (Harvard University, May 1991), p. 19.

Reconstruction of Kuwait

Kuwait was subjected to systematic pillaging during the occupation and to looting and vandalism by retreating Iraqi forces. With oil refineries, communication facilities, power stations and water desalination plants either destroyed or disrupted, real GDP declined by around 30 per cent in 1991.

With some 700 of the country's 1,130 oil wells set on fire, crude-oil production came to a complete standstill. Refineries and petrochemical plants were damaged, and there was an acute shortage of natural gas. In addition, most machinery and equipment was vandalized and inventories of raw materials, spare parts and finished products were destroyed or stolen. Oil transport facilities were damaged.

Oil production has recovered faster than expected. By November 1991, all the fires in the oil wells were extinguished, production resumed and averaged more than 189 thousand b/d (including the Neutral Zone) for 1991 as a whole. This was, however, less than one tenth of the mid-1990 level.

Other sectors are also recovering. Electricity supply was gradually restored in most of the country in 1991. With desalination plants functioning again, clean water supply resumed and reached more than half the pre-invasion level. Repair work on roads, airports, schools and hospitals began soon after liberation, and by the end of 1991 most of these facilities were back in operation.

The reconstruction costs resulting from the direct damage inflicted on the Kuwaiti economy exceeded $21 billion.[49] This includes some $10 billion for rebuilding the country's oil infrastructure and restoring output to the pre-invasion level. Given the sharply reduced oil export earnings in 1991 and the Government's decision not to liquidate its overseas investment for reconstruction purposes, the alternative was to borrow. In October, for the first time in its history, Kuwait entered the international capital markets, raising a medium-term syndicated loan of around $5 billion for reconstruction projects. It also obtained trade credits from its main suppliers.

Jordan: struggling for recovery

The Jordanian economy declined by 1.0 per cent in 1991 after a fall of nearly 6 per cent in 1990. The country was critically affected by the Gulf crisis and the war but by mid-1991 economic activity began to pick up in response to a combination of increased aid disbursements, external debt rescheduling, and the repatriation of some savings by Jordanian returnees. Tourism and related activities resumed but remain below pre-Gulf crisis level.

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[49] Report to the Secretary-General by the United Nations mission, led by Abdulbrahim A. Farah, former Under-Secretary-General, assessing the scope and nature of damage inflicted on Kuwait's infrastructure during the Iraqi occupation of the country from 2 August 1990 to 27 February 1991 (Security Council document S/22535, 29 April 1991), pp. 20-21.

The low level of economic activity and the massive influx of Jordanian returnees, led to a rise of unemployment to over 25 per cent in 1991. War-related outlays worsened the fiscal deficit in 1991 to 16 per cent of GDP.

Export receipts recovered as Saudi markets (10 per cent of Jordan's exports in the past) were reopened and phosphate and potash prices rose. Invisible earnings, however, continued to deteriorate in 1991. With 250,000 expatriate Jordanians (around 10 per cent of the work force) returning, private transfers declined. Official grants from Gulf Arab countries did not resume in 1991 and this loss was not offset by the inflow of $475 million in grants from industrial countries. The trade deficit, lower levels of aid, and the drop in tourism and transit trade earnings, raised the current account deficit to over $1 billion in 1991.

Growth in the Islamic Republic of Iran and Saudi Arabia

The growth of output in the Islamic Republic of Iran, the largest economy in the subregion, decelerated from 10 per cent in 1990 to about 6 per cent in 1991. Crude oil production increased from 3.18 million b/d in 1990 to 3.34 million in 1991. Industrial output continued its recovery though many industries are still operating at below capacity. The windfall oil revenues in 1990 allowed large imports of inputs which helped to revive industry. Agricultural output contracted due to floods and partial drought.

Saudi Arabia was the only country of the region which witnessed a sharp acceleration in economic activity in 1991, with domestic output increasing by around 12 per cent after a 9 per cent increase in 1990. The bulk of economic expansion emanated from the oil sector, with crude oil production averaging some 8.2 million b/d in 1991 compared with 6.4 million b/d in 1990. Petrochemical production also increased thanks to the improved competitiveness of gas-based industries. Banking industries recovered quickly after the end of the Gulf war.

South and East Asia: the best performers slowed down

The region was once more the fastest growing in the world, but it slowed down almost a full percentage point, to 5.4 per cent in 1991.

On the whole, economies in South and East Asia showed remarkable resilience to the unfavourable international environment in 1991. As in 1990, growth in domestic demand rather than exports was the locomotive of growth. Fiscal policy was expansionary in several of them. In Hong Kong, Malaysia, Taiwan Province of China and Singapore, government investment increased, especially in infrastructure projects in the transport system. Government expenditures increased also in Bangladesh and in the Philippines, as they struggled to rebuild after natural catastrophes. In Indonesia and in the Republic of Korea, on the other hand, public expenditures were contained, as inflation rose to near double digits. Inflation had accelerated across the region from 1989 to 1990, but was kept under control in 1991, although it did increase in Hong Kong, Pakistan and more markedly in the Philippines.[50]

Except for the Philippines and India, all economies in the region grew much faster than their population, but slower than before. Among the exceptions are Hong Kong and Taiwan Province of China, where higher growth in 1991 owed much to the boom of the southern provinces of China. Other cases of recovery are Afghanistan, with hopeful signs of peace after more than a decade of civil war and four years of steep GDP decline, and Papua New Guinea, going through a mining boom after two years of decline.

In recent years the second generation of newly industrialized Asian economies (Indonesia, Malaysia and Thailand) had begun to replace the original four newly industrialized economies (NIEs) as the engine of growth in the region, but this trend seemed to halt in 1991. Growth of the original NIEs outstripped that of the second generation. Among the original four, the rate of growth was higher than in the previous year in Hong Kong and Taiwan Province of China and only slightly lower in the Republic of Korea and in Singapore (figure II.7). In this group, export growth accelerated in 1991 to almost 14 per cent compared to around 8 per cent in the previous year, specially due to a sharp rise in trade with China, which benefited in particular Hong Kong and Taiwan Province of China.

Growth decelerated in the second generation of successful exporters of manufactures. In Indonesia, the largest of the group, the slow-down was due to drought and fiscal and monetary austerity measures. In Thailand growth slowed from 10 to 8 per cent, as infrastructural bottlenecks and shortages of skilled manpower in some industries emerged. Exports, on the average, grew faster in 1991 than in 1990, despite deceleration in Indonesia. Despite some decline in the overall flow of foreign direct investment to these countries in 1991, the tendency to relocate manufactures from Japan and from the first generation of NIEs towards Indonesia, Malaysia and Thailand continued. The same process is continuing in Indochina, as Thai and Taiwanese investment is increasing in Viet Nam and its possibilities are being explored in Cambodia. In general, economic interlinkages within the region, as well as between it and China and Japan have been increasing.[51]

India's economic performance improved in the 1980s when growth of output averaged 5.3 per cent a year compared to 3.2 per cent in the 1970s. The path of the 1980s had been one of "growth-cum-debt". Current account deficits in the second half of the 1980s were on average more than double those of the first half, financed by increasing external borrowing. Rising from $2.6 billion at the beginning of the decade, the current account deficit averaged $8 billion in the period 1990-1991. Total external debt, from $21 billion in 1980, reached over $70 billion in 1990, representing 12 per cent of GNP at the beginning of the period and 25 per cent at the end. The debt service-exports ratio tripled from 9 per cent in 1980 to 27 per cent in 1990.

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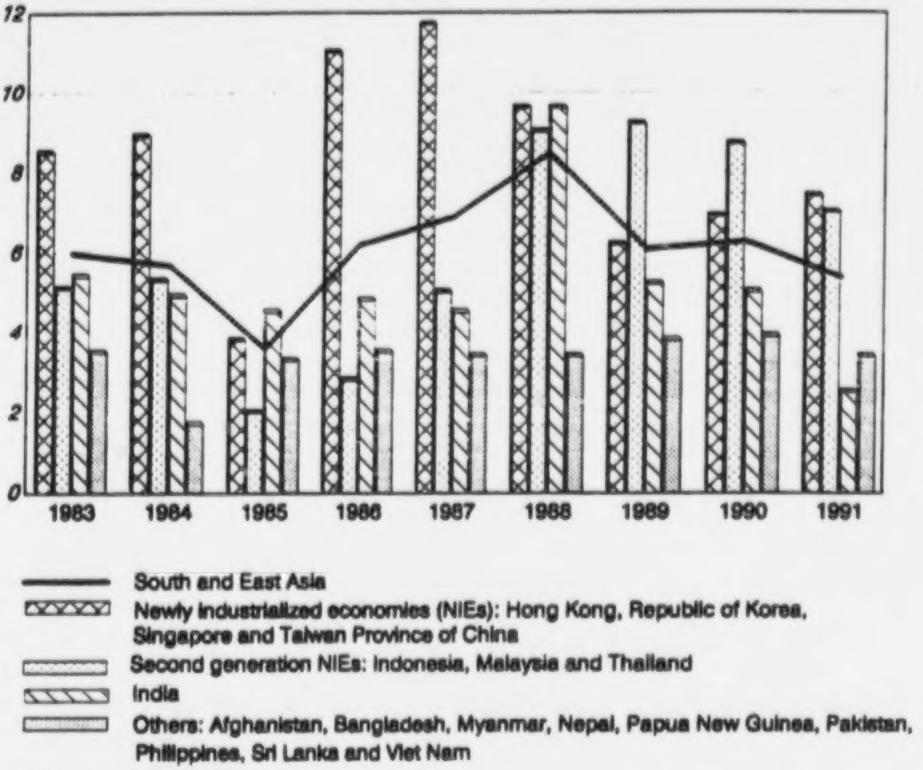
[50] See United Nations, *Economic and Social Survey of Asia and the Pacific* (ST/ESCAP/1905, February 1992).

[51] See, for instance, M. Shibusawa, Z.H. Ahmad and B. Bridges, *Pacific Asia in the 1990s* (London, Routledge for The Royal Institute of International Affairs, 1992.

Figure II.7. South and East Asia: real GDP growth, 1983-1991

(Annual percentage change)



Source: UN/DESD.

In 1991, India's growth rate fell to 2.5 per cent from over 5 per cent the year before. Restrictions on imports and bank credit in the first half of 1991 led to sharp deceleration in industry. The country suffered from the Gulf crisis: it had to reabsorb 200 thousand returnees, it had lost $500 million in workers' remittances and exports to the Gulf area and it had faced a higher oil bill in 1990. Furthermore, there was an abrupt halving in trade with the rupee payment area including the former Soviet Union, which had accounted for about 20 per cent of the country's trade in 1990. These losses compounded the deterioration of the balance of payments already in course.

Rising sectarian conflicts and the political uncertainty following the assassination of Prime Minister Rajiv Gandhi in May 1991 delayed the policy response needed to adjust to the short-run unfavourable external changes. The worsening current account position reached crisis proportions, with foreign exchange reserves down in June 1991 to a level that was not sufficient to cover even one month's imports. India was on the brink of having to default on its foreign debt.

India's new Government, which took power at the end of May 1991, has embarked on an IMF-supported programme of macroeconomic stabilization and structural adjustment, including devaluation of the rupee, measures to eliminate traditional subsidies and administered prices, and to liberalize foreign trade. A privatization programme is also on the drawing board, but faces opposition of the unions. Austerity measures that had to be introduced in the last quarter of 1991 to contain rising inflation and meet IMF criteria further slowed down growth. In support of its economic reforms, India has been able to draw on a new line of credit opened by the IMF in the last quarter of the year.

Despite sectarian tensions, the Government has consolidated its position since it won parliamentary by-elections in November 1991 and obtained victory on a parliamentary motion on its economic reforms in March 1992. In this regard, the reforms programme has gained sustainability. On the other hand, devaluation and reduction of subsidies and administered prices are initially feeding inflation, and the budget deficit, which according to the IMF programme has to be reduced from 8.5 to 6.5 per cent of GDP, remains at the higher end.

The external environment was no more favourable to the transition economies in Asia, such as Mongolia, Viet Nam or the other countries in Indochina, which suffered from the disruption in trade and other economic links resulting from the dismantling of the CMEA and the break-up of the Soviet Union. To adjust to the new situation, economic and political reforms began in Mongolia at the end of 1989. In 1991 the Mongolian Government embarked on a privatization programme. The first step was the sell-off of State stores and some food services. To prepare for the privatization of larger enterprises, two types of "privatization vouchers" were given to citizens born before 31 May 1991 entitling them to purchase shares of State enterprises and other assets. This bold attempt at creating a market economy is still to be tested in the next years. Until now adjustment and transition have been painful: output declined some 10 per cent in 1991, industrial production contracted by 12 per cent, unemployment has risen almost 50 per cent, the Government deficit shot up and inflation surpassed 50 per cent.

Adjustment has been more successful in Viet Nam, with better than expected economic performance (about 2.5 per cent output growth in 1991). The country has taken measures to attract foreign investment and in 1991 signed projects with a total value of $1.2 billion. To balance its hard currency trade accounts, Viet Nam has cut back imports and succeeded to increase exports in spite of the United States embargo. The Government has increased taxes while cutting spending in order to slow down inflation, which remained, however, at around 60 per cent.

China: growth accelerates

Economic growth accelerated in China during 1991. The gross national product (GNP) is estimated to have grown by 7 per cent, two percentage points higher than both the rate of 1990 and the Government target for 1991. Growth in total output was fueled by rapid increases in both consumer demand and investment demand. Total retail sales rose

10 per cent in real terms while fixed investment expanded by 17 per cent. Inflation inched up in 1991 but still remained moderate (table II.7).

Table II.7. China: selected economic indicators, 1989-1992

(Annual percentage change)

	1989	1990	1991[a]	1992[b]
Gross national product	4	5	7	7
Industrial output	9	8	14	10
Agricultural output	3	8	3	4
Gross fixed investment	-8	8	19	15
Value of retail sales	-8	0	10	12
Retail price index	18	2	3	7
Total exports	11	18	16	12
Total imports	7	-10	20	16

Source: UN/DESD and China's State Statistical Bureau.

[a] Preliminary.

[b] Forecast based on project LINK.

Macroeconomic policy and the domestic economy

The stabilization programme which was launched in late 1988 to combat inflation came to an end during 1991, and the Government began to follow more expansionary monetary and fiscal policies. Money supply increased 28 per cent during 1991, only slightly less than in 1990. Interest rates were lowered. Fiscal spending exceeded the government plan, partly due to unexpected fiscal outlays to aid victims of the summer floods.

A relatively loose monetary and fiscal policy played an important role in boosting investment demand. Although a reduction in interest rates by itself may have only a small impact on total demand for investment in a country like China, the general relaxation of macroeconomic policies following the end of the stabilization programme opened a floodgate that had been holding back expenditure.

Consumer spending also boomed, as reflected in a sharp rise in retail sales. Urban real income per capita increased close to 8 per cent in 1991 while farmers' income per capita grew by 2 per cent in the same period. Increased personal income boosted consumption spending directly while lower interest rates on bank deposits helped shift income from savings to consumption. Another factor which led to increased retail sales was the Government's decision to cut prices of overstocked goods.

The performance of the agricultural sector was unexpectedly good, considering that China experienced severe flooding in some of the richest agricultural areas of the country during the summer of 1991. As floods hit the provinces along the Yangtze River, an estimated total of 68 billion yuan (about $13 billion) worth of properties and output was lost. Flood waters destroyed summer crops and delayed the planting of autumn crops. Despite this, China harvested 435 million tons of grain, only 2.5 per cent less than the 1990 crop and the second highest in history, and 5 million tons of cotton, which was over 25 per cent more than the 1990 record. Total agricultural output increased by 3 per cent in 1991.

Growth of industrial output accelerated (table II.7). The collective and the private enterprises grew by 18 per cent and 44 per cent, respectively, compared with 8.4 per cent in the State sectors. The relative size of the State sector has been declining, and in 1991 it fell below 45 per cent.

The State sector continued to be troubled by a large inventory of unsold finished products and mounting bad debts. Even after extensive government rescue operations, total debts of these enterprises remained around 300 billion yuan at the end of 1991.[52]

Supporting a State sector in which one third of the firms were losing money, coupled with aid to flood victims, pushed the Government's budget deficit above the planned figure of 12.3 billion yuan ($2.3 billion) by about 8.8 billion yuan. But its inflationary effect will be limited since issue of bonds rather than printing money was the primary means of financing the deficits, and financial institutions were used as underwriters selling the bonds on the emerging financial markets.

After a year of relative price stability, the acceleration of growth in 1991 was accompanied by a modest upturn in inflation as reflected in the retail price index, which increased by around 3 per cent (table II.7). The cost of living index in major cities increased by 8 per cent in the same period. This difference reflects partly the increase in the official prices of cooking oil and other staple food items sold to urban residents at State stores last May (which has a much smaller impact on the first price index). The existence of stocks of finished goods also cushioned the inflationary pressure brought on by looser fiscal and monetary policies.

External trade and investment

During 1991, China was involved in a trade dispute with the United States over issues of copyright protection and barriers to trade. The growth of Chinese foreign trade seems to have been little affected by these frictions (see chapter III).

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[52] A comparison between this figure and the total reported pre-tax profits of State-owned enterprises of 142 billion yuan in 1991 gives an idea of the relative magnitude of the debt problem, although the firms that are in debt are not likely to be generating any profits at all.

Foreign investment continued to grow following the upward trend set in 1990. Contracted projects reached a total value of $17.8 billion in 1991, rising by 47.6 per cent over 1990. Actual investment totalled $11.3 billion in the same period, or 9.6 per cent higher than in the previous year.[53] Rapid growth was seen in investment from Hong Kong, Japan, the Republic of Korea and Taiwan Province of China. Combined with increased revenues from the recovery of tourism in 1991 and the trade surplus, these inflows pushed China's foreign reserves to about $40 billion at the end of September of 1991.[54] China, with a debt service ratio less than 10 per cent, has not encountered any difficulties in meeting its external liabilities.

Mediterranean: between two wars

With the war in Yugoslavia[55] and the slow-down in Turkey and Cyprus, the region's real GDP declined by 7 per cent in 1991. This reflects the collapse of the Yugoslav economy, brought about by civil war and ethnic violence. Industrial production dropped by more than 20 per cent in 1991. Construction declined by about 16 per cent and tourism virtually disappeared, with a drop of almost 90 per cent. Agriculture seemed to recover precariously. Altogether, domestic output declined by more than 20 per cent in 1991, after about 9 per cent in 1990. Fueled by successive devaluations, falling production and increased import prices, inflation reached more than 250 per cent for the whole of 1991. Unemployment exceeded 20 per cent. There was a complete breakdown of inter-republican trade. External trade also fell between 20 and 30 per cent. The country's political disintegration made programmes of economic reform meaningless.

In Turkey economic growth decelerated sharply in 1991, to only about 2 per cent, from over 9 per cent in 1990. The sharp economic contraction stemmed mainly from the effects of the Gulf crisis which led to a collapse of trade with Iraq, the country's main trade partner in the area and to an erosion of consumer and business confidence. The effects were felt in all sectors, excepting agriculture.

Interest rates rose sharply at the outbreak of the Gulf war and as banks, in times of uncertainty created by the crisis, sharply reduced lending. Monetary policy remained restrictive. Expansionary fiscal policies, and the end of the Gulf war led to a recovery in the second half of 1991. Industrial production recovered somewhat, mainly in consumer durables. The service sector also began to grow, albeit slowly, thanks to the revival in tourism.

Government outlays increased sharply to accommodate higher wage demands from civil servants, a rise in agricultural support prices and higher military expenditures. The budget deficit widened to 11 per cent of GNP and was financed mainly through short-term borrowing from the Central Bank, and to a lesser extent through sale of treasury bills and external borrowing. Inflation accelerated to nearly 70 per cent from 60 per cent in 1990. Unemployment rose to over 11 per cent.

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[53] State Statistical Bureau, "Report on the national economic and social development in 1991", in *The Economic Daily* (Beijing).

[54] *The Economic Daily* (Beijing), 1 February 1992.

[55] With the independence of Croatia and Slovenia recognized at the start of 1992, Yugoslavia, as a federation of six constituent republics and two provinces, has ceased to exist.

Chapter III

INTERNATIONAL TRADE

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Chapter III

INTERNATIONAL TRADE

Growth in the volume of world trade slowed for the third consecutive year in 1991 to about 3 per cent. This constituted the smallest gain since 1985, but was none the less remarkable in a year when world output declined (figure III.1). In value terms, world merchandise exports rose 2 per cent in 1991 to a record $3.47 trillion, as prices declined on average (table III.1).

The slow-down in world trade was largely due to the recession in the industrial economies and, to a lesser extent, to the collapse of the economies of eastern Europe and the former Soviet Union. The growth of export volume of the industrial countries dropped from 5.7 per cent in 1990 to a little under 3 per cent last year. Despite the decline, trade remained more resilient than output in these economies which increased by only 1 per cent in 1991 (see chapter II). Exports from eastern Europe and the former Soviet Union fell by almost 22 per cent last year in volume terms, while their imports contracted by 30 per cent. Exports of the developing countries, on the other hand, increased by about 10 per cent in volume while their imports increased by around 9 per cent (table A20).

The revival of world trade will clearly depend on the speed of recovery of the industrial economies from the current recession. The pent-up import demand in eastern Europe and the republics of the former Soviet Union both for current consumption and reconstruction should also lead, if adequately financed, to increased imports into that area. Moreover, the present efforts at trade liberalization in the developing countries should make a modest contribution to the resuscitation of world trade. Continuing protectionist trends in many parts of the world, on the other hand, could dampen these possibilities.

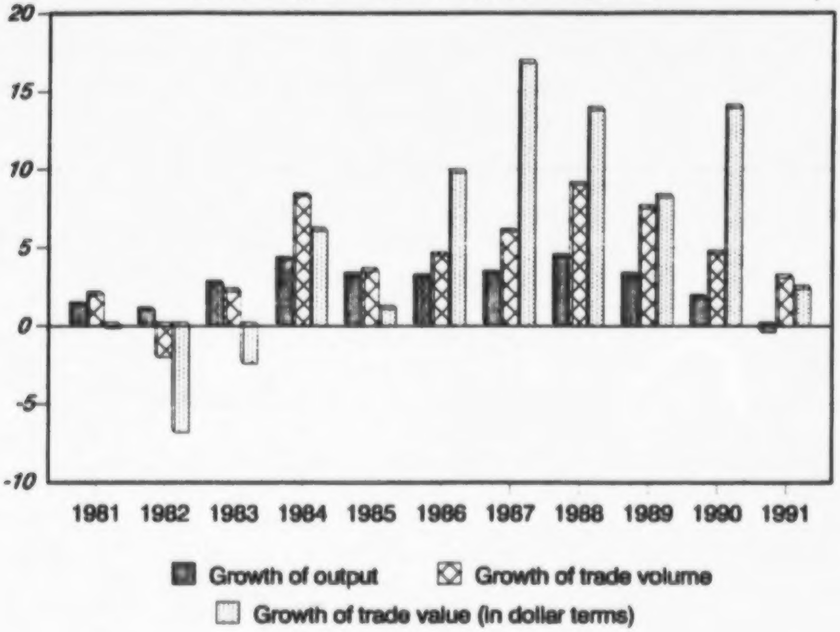
As of May 1992, when this *Survey* was completed, the outcome of the Uruguay Round remained uncertain. The biggest sticking point continued to be agriculture, but there were other important areas where the negotiations were not nearly complete. Despite declared commitments at the highest political levels among the major countries, no breakthrough looked imminent.

While the Uruguay Round negotiations wavered, forces eroding the multilateral trading system appeared to gather strength. Among the moves towards unilateralism and managed trade was the attempt to re-activate the Super 301 process in the United States. There was little abatement of protectionism among the major trading nations. In contrast, a number of developing countries--especially in Latin America --were undertaking significant liberalization of their trade regimes.

Attempts at forming regional trading arrangements continue. Some have viewed these arrangements as building blocs, and others as stumbling blocs, in the evolution of the trading system. In the latter case, the proliferation of blocs is seen as inherently likely to impair multilateralism. In the former case, trade liberalization agreed to in so-called "mini-multilaterals" is expected to spread throughout the global trading system.

Among the other long-term issues of special concern for developing countries, commodity prices, which have been falling since the early 1980s but recovered slightly in the late 1980s, are now at record low levels. Moreover, prices are not expected to recover substantially in the near future.

Figure III.1. World trade and output, 1981-1991
(percentage change over preceding year)



Source: UN/DESD.

Table III.1. World trade, 1982-1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Value of exports (billion dollars)										
World	1 806	1 771	1 873	1 895	2 083	2 438	2 768	2 988	3 408	3 469
Developed market economies	1 186	1 171	1 248	1 289	1 504	1 759	2 007	2 148	2 476	2 534
Developing countries	494	475	501	485	452	547	630	711	808	846
Economies in transition	126	125	124	121	127	132	131	129	124	90
Eastern Europe	62	61	62	64	67	69	69	67	65	43
Former USSR	64	64	62	57	60	63	62	62	59	47
Volume of exports (annual percentage change)										
World	-2.6	2.1	8.3	3.7	4.1	6.2	8.5	7.2	4.7	3.4
Developed market economies	-1.8	1.8	9.9	5.1	3.3	5.0	8.6	6.7	5.7	2.8
Developing countries	-6.9	2.1	5.6	1.1	12.0	10.9	10.2	8.5	5.9	10.1
Economies in transition	5.7	4.7	4.6	-1.0	4.3	2.4	4.3	-0.9	-10.7	-21.6
Eastern Europe	7.0	6.3	7.0	2.5	-1.2	1.3	3.6	-1.9	-7.9	-16.2
Former USSR	4.5	3.3	2.5	-4.3	10.0	3.3	4.8	0.0	-13.1	-25.0

Source: IMF, International Financial Statistics, and DESD estimates.

a Preliminary estimates.

The relationship between development and the environment has assumed great importance in national and international discussions in recent years. Concern with the issues of trade and protection of the environment has correspondingly increased.

Trade flows in 1991: salient features

Developed market economies

The value of the industrialized economies' merchandise exports and imports, which represent about 70 per cent of world trade, increased about 2 per cent in 1991, the smallest rate of increase since 1985. In volume terms, the growth of their exports slowed to just under 3 per cent from around 6 per cent in 1990, while the growth of their imports slowed from about 5 per cent to 3 per cent (table A20). This lethargic growth of trade in 1991 is largely attributed to the recession in both North America and the United Kingdom and the consequent decline in their import demand. A strong growth of import demand in Germany and the continuing strength of United States exports were the major factors sustaining the growth of industrialized country trade.

For the United States, export growth was one of the few bright spots in the economy last year. The volume of exports increased by about 7 per cent in 1991, and although this represented a slow-down from an 8 per cent increase in 1990, the growth was much higher than that of other major developed countries' exports. The growth was fueled by the decline in the value of the dollar, which reached historic lows against the mark and the yen in February 1991. Thereafter, the dollar began to rally and economic growth overseas began to stall just as the United States economy was showing signs of recovery.

The strength of exports contributed to a further reduction of United States merchandise trade deficit which shrank by about $34 billion to $74 billion in 1991. Over the period 1987-1991 the deficit as a proportion of exports declined from over 60 per cent to under 20 per cent, which makes the current protectionist sentiments in the country incongruous. The focus of protectionism has, however, shifted from overall deficit to bilateral deficits some of which remain large. Deficits were especially large with China, Japan and Taiwan Province of China, which together accounted for some four fifths of the United States's trade deficit in 1991, up from roughly half in 1988. The fact that the United States trade deficit with Asia, and particularly Japan, is not shrinking fast has put a particular spin on United States trade policy *vis-à-vis* these countries which continued in 1991.

The Japanese response has been one of accommodation. For example, in mid-March 1992, Japan announced that it would reduce its ceiling for automobile exports to the United States to 1.65 million cars per year, down from 2.3 million. This gesture is, however, expected to have only a limited impact on the American automobile industry--in part because of the depressed market and in part because of the increasing number of cars being manufactured at Japanese "transplant" factories in the United States.[1]

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[1] **Thus, Japan exported roughly 1.76 million automobiles to the United States in 1991, which was only 110,000 above the new ceiling. Moreover, this represented the fifth consecutive year that Japanese car exports to the United States fell below 2.3 million, the ceiling in effect since the mid-1980s.**

In a further bid to offset trade tensions, Japan's Ministry of International Trade and Industry (MITI) was said to be considering announcing a similar reduction in its exports of cars to Europe--though, here too, a 5 per cent quota cut would have little effect on total Japanese sales because of the existence of Japanese auto plants in Europe. Nevertheless, such a move is expected to symbolize Japanese auto makers' willingness to abide by last summer's MITI-European Community (EC) accord to limit their European market share until the end of the century.[2]

The growth of Japanese imports slowed in 1991 in response to the slow-down of the economy and was no longer one of the major growth poles of world trade that it had been since the mid-1980s. Exports also grew only modestly, at just about the same rate as imports. Nevertheless, the country's trade surplus increased by $40 billion to around $103 billion. This was largely due to a 10 per cent improvement in the terms of trade of the country, partly resulting from an appreciation of the yen and a decline in prices of oil imports. The trade balance with the United States increased, though only by just over 1 per cent, for the first time in four years. Much of the increase in overall trade surplus in 1991 was due to a sharp switch of the trade balance of the country with the EC from a deficit to a surplus, and an increase in the surplus with South and East Asia.

Largely as a consequence of unification, German imports increased sharply in 1991 while exports declined. Total imports in 1991 were some 10 per cent higher than in 1990 for Germany and was one of the major sources of growth of world trade.

Developing countries

In 1991, exports of developing countries increased by around 10 per cent in volume and by 5 per cent in nominal dollar terms as average prices of exports fell. Imports also increased sharply, by about 9 per cent in volume and 8 per cent in value. The growth of developing country trade was thus much higher than the growth of world trade. As with economic growth, there were however very large differences among countries.

Developments in 1991 that affected the merchandise trade of developing countries include the recession in developed market economies which reduced demand for their exports, the price effects of the unanticipated increase of exports of some mineral and metals from republics of the former Soviet Union (see below), the loss of export markets in eastern European countries and republics of the former Soviet Union, and the lingering effects of the Persian Gulf conflict. The roll-back of oil prices benefited the energy-importing countries.

Imports of Latin America and the Caribbean surged at the highest rate in recent years, growing 14 per cent in volume in 1991. On the other hand, exports, which had been growing at an annual rate of around 6 per cent in volume over 1987-1990, slowed to under

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[2] National import quotas that have long protected European automobile manufacturers are to disappear next year under the European Community's single market. Export ceilings--but only to the year 1999--are to replace these quotas.

5 per cent. Export revenues declined by 1.4 per cent as export prices fell. The terms of trade of the region deteriorated by around 6 per cent.

The volume of Africa's exports increased by around 4 per cent but this was more than offset by a 9 per cent decline in export unit values, leading to a 6 per cent fall in export earnings. Prices of oil, coffee, cocoa, copper and other commodities that together account for over 80 per cent of Africa's export revenues were lower in 1991. The terms of trade of the region worsened by over 7 per cent. The volume of imports increased only marginally.

The volume of exports of South and East Asia increased by around 14 per cent, while region's imports grew almost as fast, at around 12 per cent. Along with the growth of China's trade, it was one of the most dynamic elements in world trade in 1991. Although the world-wide recession had an adverse impact, trade performance remained strong because of high rates of economic growth in the region and increased trade and investment links between developing countries in the region and with Japan. Singapore's export growth slowed, but was not halted, by recession in the United States and other exporters of manufactures--Hong Kong, Republic of Korea and Taiwan Province of China--were also able to increase their exports substantially, mainly to China and the European Community. Exports from Malaysia and Thailand continued to grow fast. Indonesia's exports were relatively sluggish because of lower oil and commodity prices. On the other hand, exports of India and Viet Nam stagnated, partly because of reduced import demand in eastern Europe and the former Soviet Union. Trade flows of several countries in South Asia were adversely affected by the disruptions caused by the Persian Gulf conflict.

China's trade expanded robustly with the value of exports increasing at a rate of about 16 per cent. Imports, recovering from a decline of over 15 per cent in 1990, increased by almost 20 per cent in 1991. China's trade benefited from strong trade links with the United States, Japan and other countries in South and East Asia. The rapid expansion of exports can be attributed to reforms that allowed for increased autonomy in the export sector, an overall depreciation of the yuan, and rapid industrial growth. The import growth was a result of the lifting of austerity measures that had restricted imports in the past two years.

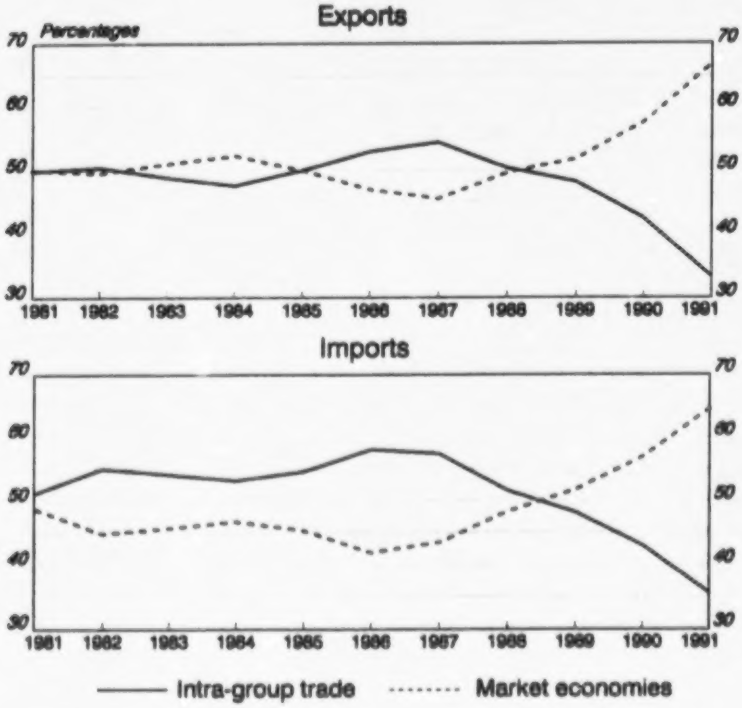
In West Asia lower oil prices led to a 10 per cent fall in export revenue despite an increase in the volume of oil exports. Much of the increase was due to higher levels of production and exports of oil in Saudi Arabia, the Islamic Republic of Iran and the United Arab Emirates. The combined volume of exports of these three countries, which normally account for about two thirds of the region's exports earnings, increased by 4.5 per cent in 1991.

Economies in transition

The volume of foreign trade of the economies in transition fell sharply in 1991. There were two major components of this decline: the sharp contraction of intra-CMEA trade and the collapse of Soviet foreign trade.

The value of exports of the five eastern European countries declined by about 10 per cent in 1991, as trade with other eastern European economies and the Soviet Union contracted sharply. Their exports to the industrial countries, on the other hand, increased by about 8 per cent. The share of inter-group trade, which had been declining recently, plummeted (see figure III.2). Imports of these countries increased by around 6 per cent.

Figure III.2. Eastern European intra-group shares of trade



Source: UN/DESD.

As with exports, there was a substantial increase in imports from the market economies, and a very sharp decline of imports from other eastern European countries, while imports from the former Soviet Union increased slightly. Exports of the former Soviet Union declined by over 20 per cent in value while its imports plunged by almost 40 per cent. Trade of the country with eastern Europe fell even more drastically.[3]

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[3] Estimation of the value and volume of trade of Eastern Europe and the former Soviet Union has always presented problems, especially those related to prices and exchange rates applied in intraregional trade. Since the break-up of central planning and the Council for Mutual Economic Assistance (CMEA), these problems have been compounded by changing trade and payments patterns, remnants of transferable rouble accounting and modified trade reporting. The trade numbers of this group of countries have therefore an unknown margin of reliability and error.

The collapse of intraregional trade

A new trading system based on convertible currency settlements and world market prices came into force in January 1991. However, because of the shortage of convertible currencies and in the absence of a system to replace the old payments mechanism, all countries of eastern Europe and the former Soviet Union tried to reduce their mutual trade drastically.[4] Lack of hard currency led to virtual destruction of an intraregional trade for Bulgaria, Romania and the Soviet Union.

Other reinforcing factors helped to destroy trade in the region. The deep recession caused by the economic transition disrupted trade. Production suffered as the established sources of foreign inputs disappeared. Widespread failure to honour foreign trade obligations was both a cause and consequence of the declining trade.

In the former Soviet Union, foreign trade was both a casualty, and a direct cause, of major difficulties for the economy. The fall in output, in particular of oil, which was the Union's main export item,[5] chaos in the institutional arrangements for foreign trade, as well as a number of ill-considered tax and regulatory measures, resulted in a steep decline in export revenue.[6] This led to a sharp reduction in hard currency imports, by probably as much as a third.

A new array of potentially significant international trade issues emerged with the dissolution of the Soviet Union and the sudden transformation of centrally-administered inter-republican flows into international trade between sovereign States. The 15 successor States have quite different levels of socio-economic development (see chap. II). A common characteristic is that, with the possible exception of Russia, trade with other republics of the former Union has been far more important than trade with the rest of the world.

Several of the newly independent States have declared their intention to re-orient their foreign economic ties "outwards". This task is compounded by their lack of competitive products other than raw materials and energy. Given the current protectionist trends in international trade, and the need for restructuring domestic industries to meet the requirements of the world market, it will be some time before these economies can achieve their goal of outward orientation.

Recognizing this, the Governments of the successor States attempted to preserve the "common economic space" of the former Union, as well as the rouble as the common currency of their trade. Political obstacles have greatly complicated this task. Nevertheless, in February 1992, 11 countries of the Commonwealth of Independent States (CIS) signed an agreement regulating the relationships between member states in the field of trade and economic cooperation. This agreement stipulated that the rouble would continue to be used for all payments and credits. Trade between them would be based on world market prices (with the exception of a limited number of "most critical products"). The participants agreed to allow the free flow of goods and services between member States.

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[4] See *World Economic Survey 1991* (United Nations publication, Sales No. E.91.II.C.1) chap. III.

[5] It was estimated by the Goskomstat that oil exports in 1991 were less than 50 million tons compared with 109 million tons in 1990. In 1991 raw materials and energy comprised more than 68 per cent of the Soviet exports (54 per cent in 1990). Gosudarstvennyi Komitet SSSR po statistike. *Ob economicheskom polzhenii strany v 1991 Godu* (Moscow, 1991), pp. 23,25.

[6] Decentralization of the Soviet Union foreign trade launched into world markets numerous new traders with no experience nor even basic knowledge of international commerce, but with an overwhelming desire to immediately sell (or barter) almost anything for hard currency, even at dumping prices. As a result, Soviet sellers were often in direct competition among themselves. At the same time, it should also be noted that Soviet attempts to increase certain exports to developed market economies (for example, uranium, or production of military-industrial complex) have sometimes met with a deliberate policy of exclusion.

Groping for trade and payments arrangements

Almost all the eastern European economies in transition have endeavoured to divert at least part of their intraregional trade flows to the market economies, with partial success in the case of Hungary and Poland. Domestic demand was severely depressed in the former CMEA countries but import demand in the west was high, and specific eastern European products were in considerable demand. Moreover, western trade concessions have had some effect. Beginning in 1990, all eastern European countries received the Generalized System of Preferences. Several quota restrictions have also been eased for them, making their access to western markets somewhat easier.

The difficulties inherent in diverting trade flows from the eastern European markets to the west should have prompted the countries in transition to reconsider the possibility of increased trade among themselves. They are, however, unwilling, mostly on political grounds, to consider this option. The idea of a Central European payments union (CEPU), suggested by United Nations staff[7] among others, received some attention[8] in 1991 but still does not have adequate political backing. The opponents of this proposal emphasize the difficulties of certain countries--mostly the republics of the former Soviet Union--in meeting their trade commitments. None the less, since most partners have a serious shortage of convertible currencies, some form of payments arrangement would be advantageous for all. Even the extension of the association agreements with the EC to Czechoslovakia, Hungary and Poland--forming a free trade area--might warrant some kind of transferable currency arrangement. The collapse of the Soviet Union as a political unit in 1991 should revive interest in this proposal since its intra-republican relations (see box II.2 in chapter II) clearly warrant a mutually acceptable trade and payments framework, perhaps in the line of the CEPU.

Several countries in the region have approached western Europe for so-called "triangle" trade financing. The idea is that, since the economies in transition cannot count on rapid liberalization of imports by the Community, the EC would partially finance trade flows between eastern Europe and republics of the former Soviet Union. So far several commitments for such financing have been made; actual disbursements, have, however, been rather small.[9]

At present, the only possible way for eastern European countries to restore trade with the CIS is to establish direct trade relations with the individual republics and territories in the Soviet Union on a barter basis. All the eastern European countries have in fact been resorting to this method.[10]

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[7] See *Economic Survey of Europe, 1989-1990* (United Nations publication, Sales No: E.90.II.E.1), pp. 147-150; *World Economic Survey, 1990* (United Nations publication, Sales No. E.90.II.C.1), p. 59.

[8] An international symposium discussed the issue in Szirák (Hungary). The summary of the findings and policy proposals are summarized in Szabó-Pelsőczi Miklós, "Kelet-európai Pénzügyi Unió", *Valóság* (No. 1, Budapest, 1992), pp. 14-25. In late March 1992 the European Bank for Reconstruction and Development convened a conference on the same subject in London.

[9] Some wheat has been purchased for Albania from Hungary, financed by the European Community (EC).

Meanwhile, Czechoslovakia, Hungary and Poland have initiated closer cooperation among themselves, as well as with Austria, Italy and Yugoslavia on political, economic and environmental issues and have formed an organization, the *Hexagonale,*[11] for the purpose. The two latest summit meetings of the leaders of the three eastern European countries, in Visegrád (Hungary) in February 1991 and in Cracow (Poland) in October 1991, decided on a common approach to foreign trade as well. As a first outcome of this collaboration, the ministers of the three countries agreed in November of last year to liberalize their mutual trade within the next five years.[12] Furthermore, the three Governments decided to form a free-trade zone which would probably go into effect in June 1992. The partners would give each other the same privileges in trade as required in their association agreements with the EC.

Association agreements with the European Economic Community

Czechoslovakia, Hungary and Poland have been pressing for an association agreement with the European Economic Community, which would not only ease some import quotas but would also acknowledge the possibility of an eventual membership in the Community sometime in the late 1990s. After protracted negotiations, the agreements were concluded on 22 November 1991 and were signed in Brussels in December.[13]

These association agreements comprise a new form of contractual relations between the EC and eastern Europe and serve as an instrument of common foreign policy towards eastern Europe. Priority is given to fostering transformation in these economies and promoting the integration of the region into western-style economic and social systems. Although the reaction to the agreements in the region has been very positive, a number of reservations have been made. Free trade for industrial goods, for example, is subject to restrictive anti-dumping and escape clauses. Furthermore, the EC remains restrictive on the question of liberalization of trade in agriculture as well as the so-called "sensitive" goods (textiles, iron, steel and coal) which are vital for eastern Europe's exports. When and if the Uruguay Round comes to an agreement on textile trade, new negotiations on textiles are foreseen.[14]

The trade part of the association accords came into force on 1 March 1992 and has a duration of 10 years, divided into two stages of 5 years each. The eastern Europeans'

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[10] Hungary had signed trade and payments agreements with Belarus, Lithuania, Russia, Ukraine and Uzbekistan, as well as with a number of republics within the Russian Federation (Bashkiria, Komi). Bilateral trade with Uzbekistan in 1992 can total $200 million. The agreements open a possibility of conducting trade worth about US$4 billion with republics of the former Soviet Union in 1992. Preparations of agreements are under way with Armenia, Azerbaijan, Estonia, Latvia and the Tatar Republic. Magyar Távirati Iroda, *Econews* (Budapest), 3 March 1992.

[11] The transformation of this group into the Central European Initiative–into which Croatia and Slovenia have been elected as members with observer status–was announced on 21 March 1992. *Magyar Hirlap* (Budapest), 22 March 1992, p.1.

[12] *Magyar Hírlap*, Budapest, December 1, 1991, p. 1.

[13] The most important parts of these agreements are summarized in *Heti Világgazdaság* (Budapest), 7 March 1992, pp. 7-9.

[14] *Népszabadság* (Budapest), 23 March 1992, p. 16.

Box III. 1. Association with the Common Market: the case of Hungary

The trade chapters of Hungary's association agreement with the EC will ultimately result in a free-trade zone, excluding agricultural products, between the 12 EC countries and Hungary by 31 December 2000. However, trade will be asymmetrical, with EC-granted benefits being reciprocated by Hungary only at a later date.

An interim agreement, entering into force on 31 December 1992, eliminates all quantitative restrictions on Hungarian industrial exports other than textiles by the end of 2000. Over 70 per cent of these products are now duty-free, while the remaining duties will be reduced to zero in stages, over five years.

Customs duties for steel will be reduced by 20 per cent in the first stage, and wholly eliminated in five years, but EC expects voluntary export restrictions from Hungary. Quantitative restrictions on textile exports will be lifted in five years under a schedule to be specified later. Textiles manufactured under contract are now duty free, and customs duties for other textiles have been reduced by 29 per cent. These duties will be eliminated in six years.

As far as agricultural products are concerned, the parties are to grant one another mutual preferences. In the next three years, the European Community will reduce customs duties for Hungarian exports by 20 per cent annually. The quotas of farm products falling under preferential treatment will be raised by an annual 10 per cent in the next five years. On its part, Hungary has reduced its farm subsidy ceiling from 35 to 30 per cent and has set the floor at 10 per cent. Four categories of products - beef, chicken, some dairy products (cheese, butter), and bottled wine - receive the highest level of protection. There will be no subsidization of goose livers, feathers and grain. Subsidies on mutton have been reduced by 10 per cent.

On 1 March 1992 Hungary reduced customs duties on 15 per cent of industrial imports from the EC. These duties are to be eliminated in three stages, by 1 January 1994. The rest of the industrial imports will become duty-free by 31 December 2000. Under the interim agreement, Hungary has the right to protect its new industries or its branches undergoing reconstruction by increasing customs duties in the transition period.

According to the agreement, any reduction of EC duties on Hungarian products can be granted only for products containing at least 60 per cent Hungarian value-added. The issue of origin, however, is further complicated by a so-called "cumulation" rule - which applies when a final product contains inputs from several countries. Hence, manufactured products assembled in Hungary, but using foreign value-added, might well be excluded from this agreement based on the issue of origin.

obligation under these treaties--to bring their foreign trade and investment laws, business regulations and other legislation governing the establishment and operation of foreign businesses into line with EC norms--began immediately with a significant easing of restrictions. In stage two--the period 1997-2001--they will have to change their laws to reflect EC norms. The three countries are obliged to end most protection of their weak industries by the end of stage one, thus exposing them to EC competition at that point. The goal of eventual membership in the Community is clearly set out in the treaty text.

Commodity prices in 1991

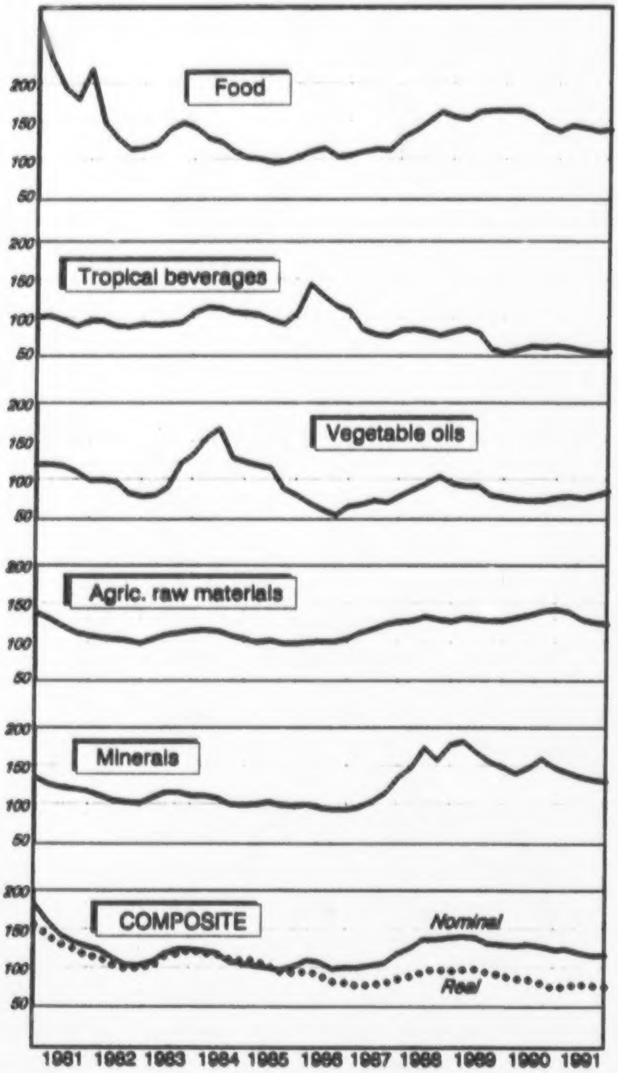
The average price of non-fuel commodities, as measured by the combined index of nominal dollar prices of the United Nations Conference on Trade and Development (UNCTAD), declined by 6.3 per cent in 1991 (figure III.3). Measured in special drawing rights (SDRs), the decline was a slightly steeper 7.4 per cent, reflecting the slight overall depreciation of the dollar. In real terms, i.e. in terms of manufactures they would buy, the decline in prices was also around 6 per cent, as prices of manufactured goods exports of industrialized countries remained practically unchanged. The decline was smaller than the 14.9 per cent fall in real commodity prices in 1990 that resulted from a combination of a 5.9 per cent decrease in nominal dollar prices and a 10.6 per cent increase in the average prices of manufactured goods (table A.22).

The continuing fall of commodity prices, which started to weaken in 1989, mainly reflected demand conditions as a consequence of the recession in developed market economies. Prices for many commodities had strengthened early in the year at the onset of the Persian Gulf war. After the conclusion of the war, forecasts of an end to the recession in the United States and a resumption of growth in other economies spurred producers of some commodities to maintain high levels of production and exports. These forecasts turned out to be over optimistic, and many markets were left with large stocks. Prices of many commodities then resumed their downward trend from the second quarter of 1991 to the end of the year.

Commodity prices in 1991 were also influenced by the supply and demand shocks to several markets that resulted from the breakup of the Soviet Union and increased participation of eastern European economies in western commodities markets. On the supply side, exports of zinc, aluminium and copper from republics of the former Soviet Union increased by 92 per cent, 65 per cent and 15.3 per cent, respectively. Prices for aluminium and zinc fell almost to the lows of the mid 1980s. Copper prices also declined on average for the year, but were supported by low stockpiles and production shortages stemming from political disturbances in Zaire and Zambia. The increased commodity exports were driven by the need for increased foreign exchange earnings and, in the case of the Russian Republic, changes in foreign exchange control laws that provided incentives for individual companies to increase exports rapidly. The flood of exports in 1991 came largely from stockpiles growing as a consequence of reduced domestic demand for industrial production.

Foreign exchange shortages and sharply reduced economic activity in these countries caused significant reductions of imports. The dismantling of the CMEA and other trading arrangements between the former Soviet Union and several developing countries created other types of market dislocations. The Soviet Union was the world's biggest importer of

Figure III.3 Non-fuel commodity price indexes, 1981-1991



Source: UNCTAD, Monthly Commodity Price Bulletin.

tin and provided the largest export market for India's tea and Cuba's sugar. Commodity imports of the Soviet Union from developing countries were reportedly cut by half in the first quarter of 1991 compared with the same period in 1990. Prices of these commodities weakened as the excess supplies were diverted to world markets. On the other hand, prices of certain food items--wheat and grain, in particular-- strengthened as production shortfalls and the threat of famine in the new republics led to massive imports of food from the United States and the European Community.

Among the major commodity groups, food prices declined by 6.6 per cent. Sugar led the decline with a loss of 27 per cent of free-market prices although the United States import price decreased by only 7 per cent. The European Community import price for sugar actually increased by a slight 3.7 per cent. Wheat prices, following a steep decline of 19 per cent in 1990, recovered from lows at the beginning of the year to almost boom levels in the fourth quarter as a result of increased shipments to the former Soviet Union, strong demand from China and reports of dwindling United States stockpiles. Nevertheless 1991 prices were on average 12 per cent lower compared with 1990.

Tropical beverage prices declined by 8.1 per cent. Increased production, weak demand in western countries, and a slump in purchasing power in the former Soviet Union and eastern Europe resulted in surpluses of coffee and cocoa that took prices to their lowest levels in 16 years. Coffee prices fell about 9 per cent in 1991. Prices for robusta coffees, exported mainly by African countries, fell by 9.4 per cent. By comparison, prices of mild arabicas, exported mainly by the major Latin American producers to North American markets, fell by 4.6 per cent. Although demand for cocoa outstripped production for the first time in eight years, seven years of bumper crops have resulted in huge stockpiles that further reduced prices by 10 per cent in 1991 but they had strengthened somewhat towards the end of the year on the basis of forecasts of lower production in some of the major exporting countries. London Auction tea prices registered a decline of about 9 per cent. Export sales remain depressed because of reduced demand in the former Soviet Union and the additional loss of the Iraqi market on account of the continuing United Nations trade embargo. Increased supplies of lower grade teas accounted for much of the price decline.

Vegetable oils and oilseeds was the only commodity group to register an increase in prices in 1991. The UNCTAD index for this group increased by 8.1 per cent following two successive years of steep declines. Coconut oil and copra prices increased, by 29.2 per cent and 25.5 per cent, respectively, largely because of drought conditions and supply problems in the Philippines. Increases were also recorded for palm oil (18.4 per cent) and palm kernel oil (22.4 per cent). Prices of every other commodity in this group fell in 1991.

Prices of most agricultural raw materials declined in 1991 leading to an overall decline in the UNCTAD index of these prices of 8.1 per cent. Cotton prices started the year with an increase but fell to a cumulative loss of 26 per cent during the second half of the year. Bumper harvests in the United States and in China, which became a net exporter for the first time in 1991, and large quantities of exports from the republics of the former Soviet Union caused the downturn in prices. Wool prices declined by 19 per cent largely because of the ending of Australia's 17-year-old price-support scheme. Jute prices rose in the fourth quarter of 1991 when Bangladesh reintroduced export price controls but fell by 16 per cent, on average, for the year because of weak export demand. Rubber prices fell by 5 per cent mainly because of the world-wide slump in the tyre industry. Prices of sisal, hides and skins and tropical timber also fell.

The UNCTAD composite index of minerals, ores and metals prices declined by 9.4 per cent, the steepest decline of all the commodity groups. Aluminium prices in December 1991 were 47 per cent lower than their peak in September 1990 and were down 20 per cent for the year as a whole. Tight stocks on the London Metals Exchange and supply problems in Zaire and Zambia held copper prices to only a 13 per cent decline for the year. Zinc prices declined by 31 per cent mainly because of oversupply conditions and reduced demand in construction and automobile industries. Tin prices have been depressed since the collapse of the International Tin Council price support scheme in 1985. Prices fell by a further 10 per cent in 1991. Small increases were recorded for phosphate rock, manganese ore and iron ore.

Negotiations aimed at reviving stalled price-stabilization schemes produced no significant results in 1991. The major coffee producers, Brazil and Colombia, failed to arrive at an agreement to withhold a percentage of exports from the market in order to strengthen prices, though Brazil actually suspended exports briefly in March 1991. The International Coffee Organization extended the International Coffee Agreement without economic clauses. Disagreements remain over export quotas between different types of coffee and a retention plan that allows for sales to non-members at substantial discounts. The buffer stock agreement of the International Cocoa Organization remains suspended because of disputes between major producers and consumers over the price range to be defended and over accumulated payment arrears of some producers. The International Cocoa Agreement is operating without economic clauses with an extension to December 1993. The most stable commodity agreement, the International Rubber Agreement, came under pressure in 1991 as major producers and consumers in the International Natural Rubber Organization failed to agree on whether to start negotiations on a new pact. The current agreement expires in December 1993 but major producers, led by Malaysia, maintain that the present agreement only succeeds in stabilizing prices at the lower end of the price support band of the Agreement.

The Association of Tin Producing Countries (ATPC), formed in 1985 after the collapse of the International Tin Council was strengthened in 1991 when China, the world's second largest producer, became a member. The association has already agreed on export reductions aimed at reducing stockpiles to 20,000 tons from present levels of 45,000 tons in order to boost prices.

The Uruguay Round

The Uruguay Round of multilateral trade negotiations has been the most ambitious by far of all the GATT negotiating rounds. Two features distinguish it from previous rounds, first, the attempt to bring some entirely new areas, services, the trade-related aspects of intellectual property rights (TRIPS), and trade-related investment measures (TRIMS), under GATT's purview and, second, the effort to bring the two old, but contentious, issues of agriculture and textiles under normal GATT rules. It has also attracted wider participation than previous GATT rounds, with a much larger number of developing countries than before taking active part in the negotiations.

The negotiations, which started in October 1986 and were scheduled for completion in four years remain stalled. After the suspension of the talks in Brussels in December 1990, negotiations were restarted in early 1991 and were intended for completion by the end of the year. In December 1991 the GATT Director-General, in his capacity as chairman of the Trade Negotiations Committee, the main negotiating body, tabled a comprehensive package of draft agreements on a take-all or leave-all basis. While this was widely regarded as a bold step to nudge forward a process of negotiations of extreme complexity, the necessary political will to accept it, or to come up with an acceptable alternative package, was lacking. Among the most contentious issues was agriculture, where the position of the United States and the European Community remained far apart on the question of production and export subsidies. However, although success in farm issues has been considered the linchpin of the success of the negotiations as a whole, there are a number of other difficult issues the resolution of which would not automatically depend on solution of the problem of agriculture.

Whatever the terms of a final compromise, there is little doubt that it would be of enormous consequence for the world trading system. There is, however, no clear-cut criterion of success. Some, in fact, maintain that while a comprehensive agreement would be optimal, the value of a modest agreement should not be discounted--especially where the alternative to a modest agreement may be no agreement.

The trading system in 1991

Attempts to manage trade continue

The past few years have been characterized by growing impatience in certain quarters with the multilateral trading system. This has led to the pursuit of aggressive unilateralism and managed or results-oriented trade by some countries in an attempt to pry open foreign markets, especially those of countries deemed to be "unfair" traders. In 1991, with a large part of the industrialized world in economic slow-down, or outright recession, interest in these trade measures appeared to gather strength.

In the United States, the focus on "aggressive unilateralism" and "results-oriented" trade continued to be on bilateral trade with Japan and a number of other countries. The ostensible justification for these policy measures has been to increase market access in situations where the partner country is perceived to be an "unfair trader". To this end, the measures utilized have been the Special 301 provision of the 1988 Omnibus Trade and Competitiveness Act, the Super 301 provision, and the Structural Impediments Initiative (SII). There is little doubt, however, that support for these measures--both among the public at large and in Congress--coincided with the poor performance of the American manufacturing sector over the past few years,[15] or that it has been greatly strengthened by the large job losses in the recession of 1990-1991.

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[15] For example, when in April 1991 the United States trade representative, Carla Hills, went before the Committee on Finance of the United States Senate to request renewal of the "fast-track authority" required by the President to continue the Uruguay Round negotiations, one of the points raised by a detractor of fast-track authority was that United States manufacturing had been in decline for the past several years and that the United States Government currently could ill afford to give away any trade concessions. See, "Review of the Uruguay Round: commitments to open foreign markets", Hearings before the Committee on Finance of the United States Senate, 17-18 April 1991 (Government Printing Office, Washington, D.C.).

The various provisions of the 1988 Act specifying actions to be taken in response to foreign trade practices judged pernicious to United States export interests continue to dominate much of United States trade policy.

The Special 301 provision of the Act, which was designed to enhance the Government's ability to negotiate improvements in foreign intellectual property regimes, provides for trade retaliation against countries judged to be insufficiently protective of United States intellectual property rights. Each year a review is undertaken to determine which countries to charge with inadequate protection. While a number of countries have been named, retaliatory action has not actually been taken in any instance. Rather the cited countries have been placed on "watch" and "priority watch" lists. Discussions are currently under way to determine which countries, if any, should be cited this year.

Super 301, which had a two-year mandate expiring 31 December 1990, differed from Special 301 in that, under its provisions, the definition of unfair trade practices was expanded to include general patterns of trading behaviour. Under this statute, therefore, a whole array of barriers of a particular foreign country could be investigated at the same time. Attempts are currently under way to revive the law in the shape of the Gephardt-Levin amendment. Under the provisions of this amendment, countries would be placed on a Super 301 list for priority trade negotiations if they (a) account for at least 15 per cent of the United States trade deficit, (b) have a current account surplus, and (c) engage in protectionist practices limiting market access for the products of the United States and other countries. According to Gephardt, this bill "will force the United States administration to deal with trading sectors that have the greatest export potential and where the most jobs are at stake, and it will force United States trading partners to live up to agreements they sign."[16]

The case against aggressive unilateralism--which is what the proposed five-year extension of Super 301 represents--is that opening foreign markets is an ongoing process since traditional trade barriers persist in most countries. For example, the United States agenda for 1992 includes the reduction of European aircraft subsidies, as well as improving market access in telecommunications. Similarly, there is the question of Japanese barriers to trade in the auto parts, glass and paper industries. All of these are, in fact, currently under negotiation or, in the case of aircraft, in GATT dispute-resolution.

Neither is targeting countries that have a trade surplus with the United States economically rational. Trade deficits and surpluses and the problem of market access are distinctly separate issues. For instance, the United States claims serious market access problems in a number of sectors in Europe; none the less, it ran a sizeable trade surplus with western Europe in 1990 and 1991. Furthermore, there is wide agreement that the United States deficit is a function of a number of macroeconomic variables--including exchange and interest rates and low domestic savings.[17]

The Structural Impediments Initiative (SII), launched in mid-1989 with the aim of modifying the workings of the Japanese and United States economies the better to reduce trade barriers between the two, constitutes another example of an attempt to "manage" trade. The 1989 and 1990 SII talks focused in large part on ways of further opening the Japanese market to American manufactures.

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[16] Richard A. Gephardt, "Super 301: it's time for teeth", *International Economic Insights*, vol.II, No.6 (November/December 1991), pp.22-23.

[17] For a further elaboration of these points, see S. Linn Williams, "The case against Gephardt II", in *International Economic Insights*, vol. II, No.6 (November/December 1991), pp.24-28.

The question of the openness of the Japanese market remains highly contentious. A substantial number of econometric studies of cross-country import ratios that now exist fail to support unequivocally the conclusion that Japan's imports are below what could be expected given its income level and resource endowments. Moreover, Japan is a large importer, the world's third largest, and its imports have been growing fast in recent years.

President Bush's visit to Japan in January 1992 was a continuation of the ongoing effort by the United States to pry open the Japanese market. The President arrived in Tokyo seeking a commitment by Japanese officials to increase their imports of American automobiles and auto parts. The results were only modest. The initial response was an announcement that Japanese auto makers would try to import nearly 22,000 "Big Three"[18] vehicles and $10 billion more in auto parts by 1995, as well as proposing measures to boost sales of American computers and paper products.

The complexity and futility of any attempt at management of trade in today's world can be illustrated by the recent example of the United States automobile industry. Given the importance of inter-industry trade and transborder trade of transnational corporations, it is not clear what an "American" or "foreign car" actually is. Thus, a car may be made in the United States by a foreign-based company or may be built abroad by a United States company. The definition of what is "foreign" or how much of a car is "foreign" has led to trade disputes. The recent dispute over import duties on United States imports of cars partly made in Canada using United States-made components is an example.

Shift towards trade liberalization in developing countries

In a significant development since the mid-1980s that contrasts with the growth of unilateralism, managed trade, and non-tariff barriers, a large number of developing countries have been liberalizing their trade regimes. Between September 1986 and April 1991, more than 30 developing countries undertook autonomous trade liberalization initiatives. Almost one third of those were in Latin America.[19] Furthermore, since the start of the Uruguay Round, a dozen developing countries have joined the GATT, and others have started negotiations to become a contracting party or are exploring the possibility of acceding.[20]

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[18] Chrysler, Ford and General Motors.

[19] See United Nations Conference on Trade and Development, *Trade and Development Report, 1991*, chap. III; and General Agreement on Tariffs and Trade, *International trade and the trading system: report of the Director General* (May 1991), appendix table 2.

[20] Besides Mexico, which acceded to GATT just before the start of the Uruguay Round, the new members that joined since then are: Antigua and Barbuda, Bolivia, Botswana, Costa Rica, El Salvador, Guatemala, Lesotho, Macau, Morocco, Tunisia and Venezuela. Algeria, China, Honduras, Nepal and Paraguay are at various stages of negotiations to join.

The new members agreed to reduce and bind most if not all tariffs and, in several cases, to take other significant steps to liberalize non-tariff restrictions.

There are several reasons for the shift towards liberalization. First, the debt crisis and the ensuing reduction in private external finance led to outward-looking trade policies as a means to increase foreign exchange earnings and as an element in policies to promote growth. Second, in many cases the availability of external assistance for stabilization and adjustment programmes in developing countries has been conditional on their adopting more liberal policies, including in the trade area. Third, views on the role of the State in development have been changing in the 1980s. Fourth, the limits of the import-substitution model and of inward-looking strategies became apparent and contrasted with the growth and resilience of a number of countries that followed outward-looking policies.

The most marked policy shift occurred in Latin America. Trade barriers have been higher in Latin America than in some of the other developing regions. A study of 50 developing countries in the mid-1980s estimated that the average tariff for all regions, and on all goods, was 30 per cent (see table III.2). In Central and South America, the average

Table III.2. Developing country tariff and non-tariff barriers, 1985

Geographical region	Tariff rates[a] Manu-factures	Tariff rates[a] All sectors	Non-tariff barriers[b]
Caribbean	20	17	23
Central America	71	66	100
South America	55	51	60
North Africa	45	39	85
Other Africa	37	36	86
West Asia	6	5	11
Other Asia	27	25	21
All regions	32	30	40

Source: UNCTAD

a Ad valorem tariff.

b Percentage of tariff lines covered by non-tariff barriers.

tariff levels were far higher--namely, 66 and 51 per cent, respectively. Moreover, the incidence of non-tariff barriers--as measured by the proportion of goods covered by non-tariff measures--was higher in Central and South America--at 100 and 60 per cent, respectively--than the average for all regions (40 per cent).[21]

Latin American countries have been active in dismantling these high tariff and non-tariff barriers. Argentina has lifted most of its traditional trade regulations, thus modifying effective rates of protection in several industrial, agricultural and agro-industrial (sugar, cotton, tobacco, wine) sectors. Similarly, Brazil has started a four-year liberalization programme aimed at bringing down its import tariffs to a level common in most of the Organisation for Economic Co-operation and Development (OECD) countries. The average import tariff is thus to be reduced to 17 per cent by October of this year and to 12 percent by July of 1993. However, certain sectors--such as automobiles and high-technology manufactures--are to retain special protection. Mexico eliminated most licenses and quantitative restrictions and unilaterally reduced tariffs over the past years, before it started negotiations on a free trade zone with the United States and Canada.

Chile undertook extensive liberalization starting in the early 1980s. It abolished quantitative restrictions and by 1988 the average tariff rate was down to 15 per cent. Colombia, Jamaica, Peru and Venezuela all commenced or accelerated trade reform last year. In August, the Government of Colombia accelerated its planned tariff reduction programme. The average duty is expected to fall to 14 per cent, down from 25 per cent before the most recent wave of liberalization measures. Peru, meanwhile, commenced reforms in March 1991, reducing tariffs to an average level of 17 per cent. Moreover, many non-tariff barriers, which reached a peak in 1987, have been eliminated, as have foreign exchange controls. The Venezuelan Government announced new measures aimed at liberalizing automobile imports. The tariff on certain types of cars was lowered last September to 25 per cent, down from 40 per cent earlier.

In Africa, a number of countries undertook tariff reductions or simplified their tariff structures since the mid-1980s, most frequently as part of their structural adjustment programmes. Côte d'Ivoire, Cameroon, Egypt, the Gambia, Ghana, Kenya, Madagascar, Malawi, Nigeria, Senegal, the United Republic of Tanzania and Zaire abolished many quantitative restrictions. Zambia freed its gemstones export. Algeria, the Central African Republic, Ghana, Nigeria, Sierra Leone and Togo abolished import licensing procedures, and other countries, including Morocco and Mozambique, reduced the number of products subject to licensing. Egypt, Morocco and Tunisia reduced tariffs.

Trade liberalization proceeded also in Asia during the second half of the 1980s. The Republic of Korea eliminated its import surveillance system that had been in place since 1977. Gradual tariff reductions aim at reaching the average tariff rate of 7.9 per cent by 1993. In India, a comprehensive set of reforms introduced in early 1991 attempted, among other things, to increase the openness of the economy. Barriers, both tariff and non-tariff, were reduced or eliminated, but severe external payments problems brought back temporary restrictions to some imports in 1991. Indonesia introduced successive trade liberalization measures since 1985, gradually cutting its average tariff to a level equivalent to less than 60 per cent of the level of 37 per cent prevailing in 1984. In its trade liberalization programme, which began in 1988, Pakistan reduced import licensing, replaced non-tariff barriers with tariffs and reduced from 225 per cent to 125 per cent in April 1991 the maximum applicable tariff. Some import restrictions for balance of payments purposes remain. The Philippines also reduced non-tariff barriers and the average tariff level. Thailand reduced import duties across the board, eliminated export taxes and removed some items from the list of products requiring import licence.

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[21] See Refik Erzan, Kiroaki Kuwahara, S. Marchese and R. Vossenaar, The profile of protection in developing countries" in *UNCTAD Review*, vol.1. No.1 (1989), pp. 29-49.

Economic integration

1991 saw a continuing trend towards the formation of regional trading blocs. Although such blocs are not necessarily and in themselves harmful to the global trading system and are not prohibited under GATT rules, their impact on the system has remained a subject of debate. Many view these emerging regional groupings as "building blocs", forging a more open and liberal trading system. However, there is little doubt that such arrangements have diverted attention away from multilateral efforts to liberalize the world trading system and, from this perspective, they have often been described as "stumbling blocs" to liberalization.

Proliferation of trading blocs in recent years coincided with the move in Europe towards a single market in 1992 and the fear that it might become "fortress Europe". The recent United States-Canada Free Trade Agreement--itself in large measure a reaction to EC 1992--has added impetus to the process.

The rationale behind the formation of trading blocs is both economic and political. On the economic side, it gives smaller countries the benefits of an expanded market, thus enabling them to realize economies of scale, while all countries in the bloc realize welfare gains through trade creation--or, the substitution of lower cost imports for domestic production. But there may be powerful political grounds for establishing a bloc--namely, that it may augment the group's negotiating leverage *vis-à-vis* third countries or other blocs and that it may help to promote regional political cooperation.

The welfare effects of creating free trade areas are ambiguous. Since free trade is generally acknowledged to be a good thing, logic would suggest that the trend toward free trade areas is an equally good thing. There are, however, at least three well-known complicating factors.

First, a trading bloc might be trade diverting rather than trade creating. Second, there could be beggar-thy-neighbour effects. These consequences stem from the substitution of consumption of their own goods for imports from the rest of the world. While the net effect on bloc members is ambiguous, the effect on outside countries is quite clear. The demand for outside country goods falls. Hence, to clear markets, the prices of these goods must fall. Thus, without any overt increase in protectionism, the formation of a free trade area might well hurt countries outside the scheme. These outcomes are, however, based on static considerations which ignore the effects of a possible increase in income on the demand for imports from the rest of the world. Third, there is also the possibility that trade blocs, having more market power in the world trading system than do bloc members individually, will be tempted to engage in more aggressive trade policies.

The costs of consolidation of the world into a few large trading blocs would probably be borne not by the countries in the blocs, but by those left out.[22] These would most likely be small, open, export-oriented countries--especially developing ones--that thus far have gained the most from a strong and liberal multilateral trading system.

Regional and subregional trading arrangements

The 12-member European Community dominates as a trading bloc. The Canada-United States agreement of January 1990 makes the two countries the second largest trading area in terms of the volume of intraregional trade. The North American Free Trade Agreement (NAFTA)--which will consist of the United States, Canada and Mexico--is now under negotiation, and an Asian trading bloc may emerge in the not so distant future. A number of other bilateral, subregional and regional trade agreements have emerged in all parts of the world over the past year or so.

The EC continues to move towards greater integration and will have achieved its goal of a single market by the end of 1992. At the same time, the creation of a continent-wide European Economic Area, encompassing both the Community and countries of the European Free Trade Association (EFTA) remains an ultimate objective.

The treaty of Maastricht, agreed upon by the twelve members of the EC in early December 1991, represents yet another step towards deepening integration--i.e., the creation of a fully-fledged European Union. The basic thrust of the treaty is both economic and monetary, as well as political. The move toward economic and monetary union (EMU) will centre on the establishment of a single currency by 1999 (see chap. II).

In addition to deepening its integration, the EC continues to widen the range of its associations. On 22 October 1991, the twelve nations of the EC and the seven nations of EFTA reached an historic agreement to form the European Economic Area (EEA). This accord, which is scheduled to take effect at the start of 1993, will create a free trade area embracing 380 million people, with a combined gross domestic product of nearly $6.9 trillion and accounting for roughly 40 per cent of world trade. Nearly all obstacles to the flow of people, goods, money and services will be eliminated, though the sensitive agricultural sector has been excluded from this agreement and special arrangements will cover food, fish, energy, coal and steel. EFTA will keep its own farm policy and will not have to join the EC's Common Agricultural Policy, though both parties will work toward agricultural liberalization. Decisions in the EEA will be made by a Council of Ministers, which will meet at least once every six months. There will also be an independent joint court, modelled on and linked to the EC's European Court of Justice, to settle disputes.[23]

The agreement may be the first step for many EFTA countries to full membership in the EC. Thus, Austria, Finland and Sweden, as well as Cyprus and Malta, have already applied for membership, while Switzerland has also indicated its intention to do so.

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[22] For a further elaboration of this point see: Paul Krugman, "The move toward free trade zones", Federal Reserve Bank of Kansas City, *Economic Review*, November/December 1991, pp. 5-25.

[23] However, details on this latter aspect of the agreement remain to be worked out in the wake of a post-accord ruling by the European Court that this arrangement undermines its role as the EC's supreme court.

Eastern Europe has also looked toward the Community for preferential access. As mentioned before, Czechoslovakia, Hungary and Poland sought radical improvements in their EC market access and associative agreements were reached in November 1991, paving the way for complete free trade between the EC and the three eastern European nations within 10 years.

In the Black Sea area, Turkey, together with Bulgaria and Romania, as well as the Republics of Armenia, Azerbaijan, Georgia, Moldova, Russia and Ukraine, agreed in early February of this year to establish the Black Sea Economic Cooperation Region. The formal pact is to be signed in mid-year. The grouping is seen as a step to integration with the world economy and as a way of resolving regional dislocations and conflicts.

Also, in February 1992, Azerbaijan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan were admitted to the Economic Cooperation Council founded by the Islamic Republic of Iran, Pakistan and Turkey 27 years ago.

In the Baltic, the three newly independent States of Estonia, Latvia and Lithuania announced their intention, in September 1991, to form a customs union modelled on the European Community in order to promote economic growth. Joint projects are planned to improve transport and telecommunications and to modernize agriculture.

In the Western Hemisphere, progress continues towards the establishment of a number of free trade agreements. Furthest advanced in this regard is the North American Free Trade Agreement, latching together Canada, Mexico and the United States. Trade ministers from these three countries began negotiations last June in Toronto. Nineteen working groups were set up to negotiate under six headings: market access, trade rules, services, investment, intellectual property and dispute settlement. The talks, if successful, would establish a free trade zone encompassing some 360 million people with a combined income of $6 trillion. However, by the early spring of 1992, it seemed increasingly unlikely that the pact could be concluded within the year, as originally hoped. None of the 19 negotiating groups had reached an agreement, while talks in the highly contentious energy and automobile negotiating groups were still "in the concept stage". Moreover, in the light of the controversial implications of the proposed NAFTA agreement for the industrial states of the American midwest, where there is concern about possible job losses to low-wage Mexican workers, it seems unlikely that such a trade agreement--even if concluded--would be put before the Congress for "fast-track" approval in an election year.

Meanwhile, other free trade initiatives continue in the Americas. Thus, on 1 January 1992, the Andean Pact, consisting of Bolivia, Colombia and Venezuela, came into effect. Ecuador and Peru are slated to join the free-trade accord by mid-year. The initial agreement did not specify a common external tariff, though, when set, it could be as low as 5 to 20 per cent, depending on the goods being imported, thanks to a round of independent tariff cuts in these countries over the past few years.

The free trade agreement between Argentina, Brazil, Paraguay and Uruguay, the Southern Cone Common Market or "Mercosur", took effect in March of last year. According to this pact, goods, services and labour are scheduled to have complete freedom of movement between Argentina and Brazil by the end of 1994, with Paraguay and Uruguay following a year later.[24] The Mercosur trade pact has already led to the expansion of trade among its members. Perhaps more important, the investment strategies of firms in the region are being influenced by the existence of the pact.

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[24] For further details, see chapter III of *World Economic Survey, 1991*, p.62.

In Central America, attempts are under way to revive the Central American Common Market, which was originally set up in the 1960s, but which disintegrated in 1969 because of dissension among some of its members. The five members--Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua--and Panama decided in July of last year to re-establish the Common Market by mid-1992. In December, they signed the "Tegucigalpa Protocol" to introduce basic changes in the constitution of the Organization of Central American States to enable a regional economic bloc to be formed.

Attempts also continue to create a customs union among the members of the Caribbean Economic Community (CARICOM). Implementation was originally slated for 1991. The stumbling block appears to be the establishment of a common external tariff and concern over the impact of such a tariff on the individual economies.

Bilateral trade arrangements are also being pursued in the Western Hemisphere. For example, a free trade agreement was signed between Chile and Mexico in September 1991. Bilateral tariff and non-tariff barriers are to be progressively lowered, commencing in January 1992. The basic common tariff applicable to most products is to be 10 per cent in 1992 and this is gradually to be reduced to zero by 1998. Then, too, some 16 "framework" agreements have been signed between Latin American countries and the United States since 1987. Ostensibly agreements merely to discuss trade issues, these may pave the way for a continent-wide trading bloc in the Americas.

In Africa, the members of the Organization of African Unity signed, in June 1991, a treaty establishing the African Economic Community.[25] The Community is to be set up in stages of variable duration over a transitional period not exceeding 34 years. The Community is to begin with the stabilization of tariff and non-tariff barriers, pass through the phase of a Free Trade Area, and eventually evolve into a fully-fledged Customs Union at the continental level.

Meanwhile, leaders of eastern and southern African countries met at the end of January 1992 to discuss efforts by the 18-nation Preferential Trade Area (PTA) to evolve into a common market.[26] According to the PTA's Secretary-General, the trade flows in the region have the potential to increase two-fold from their current level. Official trade between PTA member States amounted to $1.1 billion in 1989-1990, a fraction of the countries' external trade.

In Asia, members of the Association of South-East Asian Nations (ASEAN)--whose members are Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand--agreed in late January of this year to take the first steps toward the creation of a regional common market. Under the accord, the six nations will integrate their economies by reducing or eliminating tariffs and non-tariff barriers on manufactured goods within 15 years. Though the agreement has been criticized for its drawn-out timetable and for the fact that hundreds of products may be exempted from tariff cuts by each Government, the accord none the less represents a considerable change for ASEAN, a grouping which has so far moved slowly on proposals to expand regional economic cooperation. The present move is seen as a response to the trading blocs being formed in western Europe and North America and ASEAN's concern that South-east Asia could be shut out of these mega-markets.

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[25] Members are: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Comoros, Congo, Côte d'Ivoire, Djibouti, Egypt, Ethiopia, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Liberia, Libyan Arab Jamahiriya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sahrawi Democratic Arab Republic, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, United Republic of Tanzania, Chad, Togo, Tunisia, Uganda, Zaire, Zambia, Zimbabwe.

[26] Members of the Preferential Trade Area for Eastern and Southern Africa are: Angola, Burundi, Comoros, Djibouti, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Rwanda, Somalia, Sudan, Swaziland, United Republic of Tanzania, Uganda, Zambia, Zimbabwe.

Under the terms of the agreement, 15 large groups of goods made in the region will immediately be singled out for tariff cuts, including ceramics, chemicals, electronics, jewellery, pharmaceuticals, plastics, textiles, and wood furniture. ASEAN members pledged to reduce tariffs on these products to no more than 20 per cent within 5 years, and to no more than 5 per cent by the year 2008. The agreement takes effect on 1 January 1993.

It is evident from the above that trading blocs have become a fact of life in the early 1990s. There may be grounds to view these blocs as complementary to multilateralism rather than an alternative. For a trading system filled with blocs to be manageable, and for inter-bloc trade to proceed smoothly, however, an efficient and effective GATT system is more critical than ever.

Trade and environment

Issues of the environment have become increasingly important at both national and international levels in recent years. There is also a shift in the way these issues are viewed. Rather than considering them in isolation, they are now beginning to be viewed as an integral part of a complex set of issues linking patterns of current production and consumption and future economic growth with the quality of the human environment. International trade, as the vehicle of exchange of goods and services across national boundaries and as an engine of growth of world output has important implications for the environment. Concern with these implications is not new. The growing interdependence of the world economy, the environmental degradation that has already taken place in many parts of the world, as well as the need for further trade liberalization, have only heightened the concern. The preparations for the United Nations Conference on Environment and Development have greatly stimulated discussions of these issues.

Rules governing the multilateral trading system have not ignored environmental issues. Although GATT has no rule specially directed towards protection of the environment, its provisions allow exceptions to the normal rules on environmental grounds. Article XX provides that nothing in the Agreement should prevent member countries from adopting measures to protect human, plant and animal life or to conserve exhaustible natural resources. Differences have arisen on the interpretation of these exceptions and the GATT dispute settlement panels have so far examined a number of such disputes.

The Agreement on Technical Barriers to Trade (TBT) signed under the Tokyo Round of multilateral trade negotiations allows signatories to deviate from international regulations and standards for health, safety and environmental considerations. It, however, obliges them to ensure that the exceptions are not applied in a way that unnecessarily obstructs trade and discriminates against imports *vis-à-vis* domestic production. The Agreement requires signatories to notify the GATT secretariat, in all cases where technical regulations are not based on international standards, products covered and the rationale and objectives of the regulations. During the period 1980-1990 the secretariat received over 200 notifications the objectives of which were environmental protection.[27] Negotiations under the Uruguay Round have sought to modify the scope of the Agreement to include processes and production methods as well as product characteristics which alone are covered by the definitions of the present Agreement.

A number of other areas of negotiations under the Uruguay Round involve issues relating to protection of the environment.[28] In "Agriculture" the draft decision on sanitary and phytosanitary measures is designed to ensure that they are only those that are necessary for the legitimate protection of human, animal and plant life and are not arbitrary barriers to trade. The draft agreement on subsidies and countervailing measures contains modifications to normal trade rules allowing subsidies for the purpose of protection of the environment, among other specific aims.

A GATT Group on Environmental Measures and International Trade was set up as far back as 1971, to examine, upon specific request of member countries, trade policy aspects of measures to control pollution and protect the environment. The Group was, however, never convened. In early 1991, renewed concern with issues of trade and environment resulted in an informal meeting, but differences of views remained on the competence of GATT to deal with environmental matters beyond its current scope. The reservations of a number of GATT members on the legitimacy of GATT work in these matters also stemmed from their eagerness to ensure that these questions do not divert effort from the completion of the Uruguay Round.

A GATT Working Group on Export of Domestically Prohibited Goods and Other Hazardous Substances was set up in July 1989. It aims at increasing the transparency of national measures adopted for products which present a serious and direct danger to human life, animal life and the environment, but for which no equivalent measure has been taken on the export side.[29]

A large number of international agreements and instruments relate to the environment. The number is partly a reflection of the fact that there are many environmental problems that are beyond the power of individual nations to control. The United Nations Environment Programme (UNEP) lists 152 such agreements,[30] many of which concern international trade, though mostly indirectly. Among the most important of them are the Vienna Convention for the Protection of the Ozone Layer, and the Montreal Protocol; the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; the London Guidelines for the Exchange of Information on Chemicals in International Trade; and the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Being international agreements which set common standards for all parties, they do not constitute any real hindrance to trade. The aim should be to make them as universal as possible, except for agreed exemptions, so that all trading nations have the same code of conduct to follow and friction is avoided.

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[27] General Agreement on Tariffs and Trade, *Trade and Environment: factual note by the secretariat* (L/6896).

[28] Ibid.

[29] *Focus: GATT Newsletter*, No. 85 (October 1991).

[30] Mentioned in General Agreement on Tariffs and Trade, *Trade and Environment* (L/6896).

Not all international agreements have universal participation and neither do they cover all matters of relevance to international trade. Frictions and trade distortions arise when a country attempts to enforce its national rules and standards in a way that affects the trading interest of other nations whose rules and standards may be different or non-existent. This may be the case even where the country applies its rules and standards equally to domestic production as well as to exports. The recent tuna dispute between Mexico and the United States is a case in point.[31]

In other cases, Japan has objected to bans on exports of raw logs in various countries aiming to protect forests, and Germany has complained about Denmark's insistence on deposits on beer bottles. While environmental standards are sometimes seen as a new form of non-tariff barriers, environmentalists complain that some countries are tempted to use lax regulations to attract industries.

Clearly, the protection of the environment and promotion of trade need a set of rules that are acceptable to all trading nations. However, complications arise on the questions of internalization of environmental costs and international competitiveness. Some countries, especially those at low levels of income, place a greater premium on growth than on the environment. National environmental standards thus vary greatly. Consequently, particular industries in some countries might include environmental costs in their cost calculations more completely than their competitors in other countries, giving the latter a competitive advantage.[32] These questions can be resolved only in a multilateral framework. But they also lead to the broader issues of development priorities in a world where nations are at very different levels of development and production and consumption patterns vary greatly among countries.

While protection of the environment is a legitimate concern of any nation, it can also be used as a cover for trade protection. This is one of the major dangers to the trading system. Here again, the balance between the legitimate environmental interests of a country and the need for an open trading system that benefits all can only be attained through multilateral action.

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[31] The United States banned imports of tuna from Mexico, Venezuela and Vanuatu on the ground that these countries violated a United States law which lays down standards of fishing in order to protect dolphins that are often the casualty of tuna fishing. Mexico asked for a GATT dispute settlement panel, which found the embargo a violation of GATT rules.

[32] Doubts have, however, been expressed about the size of cost differences due to differences in environmental standards. See General Agreement on Tariffs and Trade, *International Trade 90-91*, vol. I (Geneva, 1992).

Chapter IV

SAVING, INVESTMENT AND THE INTERNATIONAL TRANSFER OF RESOURCES

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Chapter IV

SAVING, INVESTMENT AND THE INTERNATIONAL TRANSFER OF RESOURCES

To judge by commentary in the world press and in some international forums, there is widespread concern that the total level of saving in the world will not be large enough to meet global investment needs over the 1990s. Investment plans would have to be cut back to fit the savings being generated by national and international economic processes, and a slow rate of world economic growth would result. Concern is also expressed that the global allocation of world saving as it was in much of the 1980s will persist in the 1990s, wherein higher income areas receive a net inflow of foreign saving from lower income areas.

This chapter reviews recent trends in saving, investment and the net international transfer of resources and concludes that world economic growth is expected to be unnecessarily restrained in the medium term, but not by a saving shortage in the ordinary sense. There is, rather, an inadequate allocation of the world's resources to investment projects. Developing countries, particularly in Asia, have demonstrated the "virtuous cycles" that result from a high investment, high growth policy in a context of relatively well-managed financial and fiscal systems. In other cases, debt overhang and fragile economic situations hold back possible investment and growth levels. Among the formerly centrally planned economies, the disruptions of the transition process are deterring investment and medium-term progress requires success in implementing new systems of financial intermediation. Among the developed market economies, government investment needs to be stepped up, international flows need to be augmented to support capital formation in developing and transition economies, and especially in the United States, private investment could be effectively stimulated as well.

Investment, saving and net transfers

In recent years, annual world investment has surpassed $5 trillion. But as a share of gross world product it has been on a declining trend for decades. From 1950 until the early 1970s, the share of world investment in gross world product rose almost steadily, reaching a figure of almost 27 per cent in 1973, from which point it fell to almost 22 per cent in 1983, before beginning to rebound.

Changes in the world investment share have roughly followed the cycles of growth in world output, generally rising during the periods of more rapid world growth and declining during periods of slower growth and recession, as can be seen in figure IV.1.[1] Since producers generally seek to expand capacity when sales and profits are rising and since investment in the capital stock is the major means by which productive capacity is augmented, this cyclical relationship is an expected one. However, a long-term downward trend in the share, extending over several cycles, is disturbing since a sustained decline in investment effort could translate into slower world economic growth in the future. As discussed in chapter II, world output actually declined in the early 1990s, and only a slow recovery is forecast for the medium term. In that light, the prospects for investment could well be a cause for concern.

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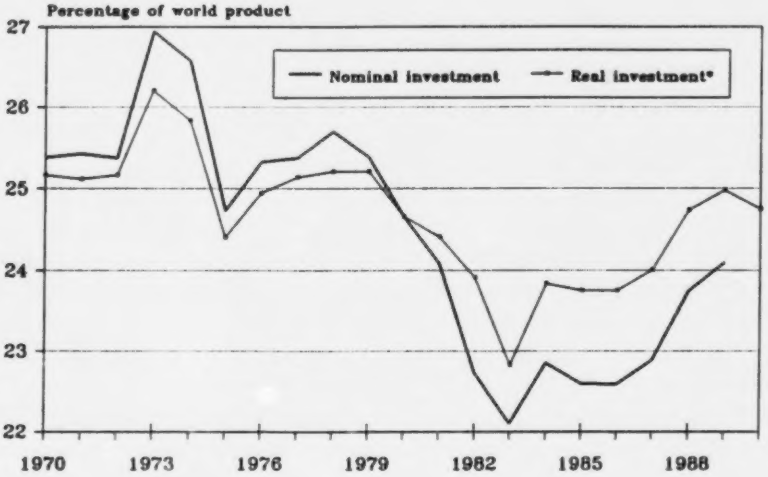
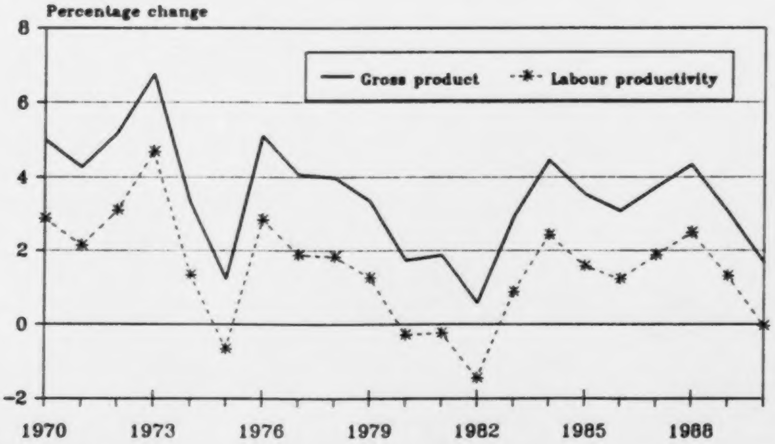
[1] These data are based on an analytical reconstruction of national accounts statistics that allow for highly consistent aggregations of data across countries and over time, derived from major components of national expenditure and output.

Figure IV.1. World investment and the growth of output, 1970–1990

A. Investment shares



B. Production and productivity*



Source: UN/DESD.

* Valued in 1980 prices and exchange rates.

There is no *a priori* reason that expenditure on investment should be a fixed proportion of output. Since 1973, the prices of investment goods have fallen relative to those of other goods and services. The real value of investment as a share of output could be maintained with a decreasing share of investment expenditure. Thus, when measured in constant prices and exchange rates, the investment share in global output seems to have fallen less than when measured in current prices (see again, figure IV.1). This notwithstanding, the trend is still a declining one.

The relationship between the investment effort, as measured by the share of capital formation in gross product, and the growth of labour productivity, as measured by the growth in output produced per person in the labour force, has long been a close one. Thus, average gross output per worker in the world economy rose rapidly during the 1960s and early 1970s, a period when investment effort steadily increased in all main regions of the world economy. During the period of falling investment share from 1974 to 1982, the growth of world labour productivity also slowed. Indeed, it became negative and output per worker fell from 1980 to 1982. When the investment share began to recover after 1983, so, too, did productivity, at least until the current recessionary cycle began (see figure IV.1).

This is not to say that productivity is exclusively determined by the investment effort. Productivity rises for a variety of reasons and even the contribution that investment makes to productivity growth is affected by more than the volume of resources mobilized for capital formation. It depends, in particular, on the technology embodied in the investment, the flexibility of management and labour in making most efficient use of new capacity, the education and skills of the workforce, the level of unemployment, and so on. An increasing stock of capital per worker is, nevertheless, recognized as a fundamental source of productivity growth.

From the first half of the 1970s to the latter half of the 1980s gross output per worker rose only about 20 per cent in the world as a whole (see table IV.1). Most of the increase took place in the developed market economies, where investment per worker has been far higher than in the rest of the world, even if it only grew in the last half of the 1980s.

Data for the countries of eastern Europe and the former Soviet Union also showed substantial productivity gains over two decades, although as has subsequently become more clear, the quality of their output was frequently inferior. As may also be seen in table IV.1, investment per worker in the countries that are now in transition to market economies was never as much as half the level of the developed market economies, and the efficiency of the investment undertaken was generally low.[2]

Productivity growth in the developing countries displayed a pattern that has been repeated for almost all macroeconomic indicators: Latin America and the Caribbean experienced a measure of productivity growth in the 1970s and stagnation thereafter; Africa has enjoyed virtually no growth in average productivity in the entire period and Asia's productivity has doubled, albeit from a very low starting point. Not surprisingly, investment per worker barely rose at all in the developing countries and in Africa and Latin America it actually declined. In these countries in particular it is crucial that investment spending be raised in a significant and sustained manner.

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[2] See the review of investment in eastern Europe and the former Soviet Union in *World Economic Survey, 1986* (United Nations publication, Sales No. E.86.II.C.1), pp. 121-134.

Table IV.1. Productivity and investment in the world economy, 1971-1990

(Thousands of 1980 dollars)

	1971-1975	1976-1980	1981-1985	1986-1990
Gross product per worker				
Developed market economies	20.2	22.0	23.0	25.8
Eastern Europe and USSR	6.0	7.3	8.2	9.2
Developing countries	1.5	1.7	1.8	1.9
of which:				
Africa	1.8	2.0	1.8	1.8
Asia, excluding West Asia	0.6	0.8	0.9	1.2
Latin America and the Caribbean	5.4	6.0	5.9	5.8
World	5.5	6.0	6.2	6.6
Investment per worker				
Developed market economies	5.1	5.2	5.1	6.2
Eastern Europe and USSR	1.9	2.3	2.3	2.4
Developing countries	0.3	0.4	0.5	0.5
of which:				
Africa	0.4	0.5	0.4	0.3
Asia, excluding West Asia	0.2	0.2	0.3	0.4
Latin America and the Caribbean	1.2	1.5	1.1	0.9
World	1.4	1.5	1.5	1.6

Source: UN/DESD.

Note: Workers include unemployed as well as employed labour force, in accordance with ILO practice).

Saving and net transfers

The case for an increase in world investment effort in the 1990s thus seems compelling. And if investment increases, world saving also increases. It is a matter of definition, as for the world as a whole, the level of saving and investment are identical.

Saving is that amount of the value of production that is not expended on consumption. Investment is all capital expenditure, i.e., expenditure made with a view to increasing production later.[3] The investment intentions of enterprises, households and the government are formed independently of their plans to save. But investment that is not financed from the investor's own saving is financed from the saving of others. Hence, any increase in the rate of world capital formation will be financed by a reallocation of income somewhere in the world away from consumption spending--whether by the private sector or government--and towards saving.

This is not true, however, at the level of individual countries. If the desired level of investment in a country exceeds the domestic saving that is forthcoming under the economic conditions then present, foreign saving may be transferred to make up the shortfall. The transfer takes place through any number of financial channels, but in the end the recipient country imports more than it pays for with exports and so the country can spend more on investment and consumption than it could from its own income alone. When that happens, the country is said to receive a "net transfer of resources from abroad". And vice versa, a country is said to make a net transfer (or sometimes, receive a "negative net transfer") if its saving exceeds what is applied to domestic investment.

Thus, the shares of world investment and saving of the different major country groups--developed market, transition and developing economies--are not exactly equal, as net transfers occur between the groups, but at this level of aggregation the transfers are relatively small. In other words, the overwhelming majority of investments in each group of countries is financed out of its own saving. The broad orders of magnitude in the late 1980s reflected the great weight of the developed market economies in the world economy, namely that about two-thirds of global investment and saving were in those countries, about 15 per cent were in eastern Europe and the former Soviet Union and roughly a fifth in the developing countries.[4]

At a more disaggregated level, the net transfer of resources has been economically important and politically sensitive. Indeed, the direction and composition of the international transfer of resources as regards developing countries, which will be discussed in some detail below, has been a topic of major policy interest in international forums.[5] The net transfers do not necessarily follow economically efficient or politically desirable directions. They embody the net result of innumerable international trade and financial transactions, while also being the net result of all the domestic investment and saving decisions. Net transfers are, moreover, only partly under the influence of governments.

If the global investment effort were strengthened in the 1990s, most of the saving for the investments would be generated within the country groups, indeed, within the domestic economies of the investing countries. Yet, given the economic dominance of the developed market economies, a proportionally greater increase in their saving than in their investment might provide considerable resources for investment in the other country groups.

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[3] Total investment is conventionally defined to include additions to inventories, which would raise output or final sales at a later date, as well as purchase of machinery or construction expenditure (standard United Nations definitions of these and other macroeconomic categories may be found in *System of National Accounts* (Sales No. E.69.XVII.3), currently being revised by the Statistical Commission of the United Nations).

[4] The differences between the shares of investment and saving of country groups noted here and the output shares of the same groups, as seen in box I.1, are accounted for by the lower share of output invested in developed economies as a whole than in the rest of the world.

[5] Recent examples of resolutions that result from such discussion include General Assembly resolutions 44/232 of 22 December 1989 and 45/192 of 21 December 1990, as well as Economic and Social Council resolution 1989/112 of 28 July 1989, all of which pertain to the net transfer of resources between developing countries and developed countries.

It appears, however, that the developed market economies have been saving less over time as a share of total output, as have the capital-surplus oil exporters of the Middle East, a grouping of developing countries that once had been a significant source of net transfers to other countries (see figure IV.2[6]). Excluding the latter countries, the developing countries appear to have significantly raised their saving rate, in particular after the recession-induced fall that affected all these country groups in the early 1980s. This has mainly been accounted for by the rapidly growing economies of Asia. In countries in which per capita income was stagnant or falling, to raise the share of income saved would have required reducing the level of consumption per head.

As investment promotes growth, so growth promotes saving. In countries where per capita income is rising rapidly, a relatively large portion of the increment to income is more easily saved. Individuals, family groups and corporate enterprises are encouraged to invest by the dynamic situation and the greater availability of resources to invest. A developing financial system provides the means to marry project ideas and financing. And if the tax system is effectively designed to raise appropriate revenues from the increasing incomes, government saving increases, allowing more government investment to be financed from government resources. If the public-sector borrowing requirement is thereby reduced, yet additional resources are freed for private investment.

In countries where such "virtuous cycles" take place over many years, saving continues to grow and eventually surpasses the domestic demand for investment. Net transfers of resources begin to be made to other countries, financially taking the form of reduced foreign debt levels and increasing investment abroad. This has already been the case for the first generation of Asian exporters of manufacturers, Hong Kong, the Republic of Korea, Singapore and Taiwan Province of China. However, for many other developing countries, in particular, the heavily indebted ones, net foreign transfers have been made under far less advantageous conditions. Indeed, 1991 marked the first break in what has been a decade of very difficult years.

The net transfer of resources in 1991

Last year the developed market economies transferred about $25 billion to developing and transition economies, mainly the former (see table IV.2[7]). Only a year before, the advanced industrial countries had received a transfer of $24 billion and a similar transfer of $25 billion the year before that. The developing countries had made transfers abroad of $24 billion to $36 billion in each of the previous four years.

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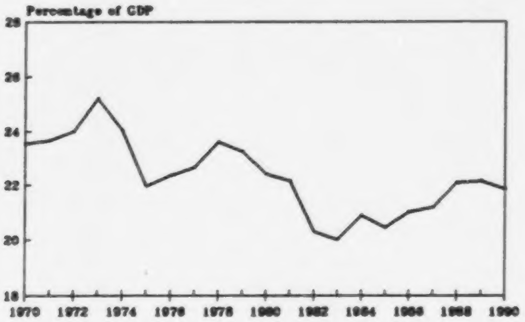
[6] For most of the formerly centrally planned economies, economic methodologies in the 1970s and 1980s were too different from those in the rest of the world for comparison with data on domestic saving elsewhere to be meaningful. They are thus excluded from the figure.

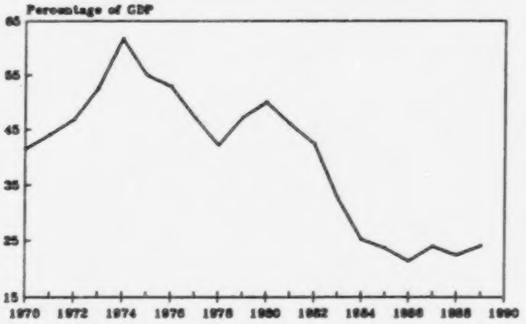
[7] The data in table IV.2 are derived from balance-of-payments data, and are subject to a major weakness from the point of view of global analysis; namely there is a very large volume of unrecorded transactions. Thus, instead of world trade balances and current account balances being equal to zero, as they should in theory, the sum of all country balances runs as high as $75 billion (see table A.23). It is widely believed that most of the difficulty is in the accounts of the developed market economies, and so the size of their net transfers–if not the overall thrust of the yearly changes–must be interpreted with special caution.

Figure IV.2. Saving of developed and developing countries, 1970–1990*

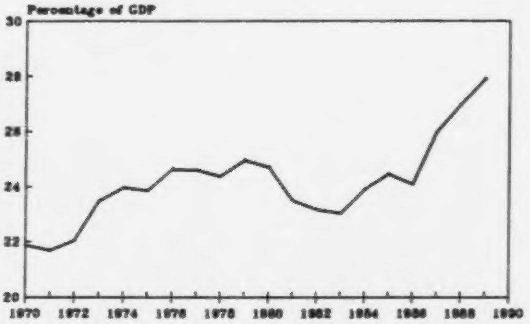
Developed market economies



Capital-surplus developing economies



Capital-importing developing economies



Source: UN/DESD.

* Measured in current prices and exchange rates.

Table IV.2. World net transfer of financial resources, by country group, 1981-1991[a]

(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Developed market economies	12.3	7.1	4.7	35.6	26.2	-14.9	9.6	4.3	24.9	23.7	-24.5
of which:											
Germany[c]	-3.4	-13.5	-10.4	-13.2	-21.0	-44.9	-54.5	-59.4	-59.8	-47.8	♦ 7.5
Japan	-7.2	-6.5	-19.3	-32.3	-44.0	-78.4	-74.0	-62.7	-37.8	-18.2	-58.4
United Kingdom	-14.7	-8.5	-3.8	1.1	-4.8	4.1	8.0	30.3	32.7	23.7	8.4
United States	16.7	24.9	58.1	110.3	123.6	141.1	154.2	117.6	94.5	82.6	38.6
Developing countries	5.3	34.2	18.2	-22.9	-17.9	10.7	-35.1	-24.4	-30.6	-36.4	23.7
Eastern Europe and the Soviet Union[c]	-2.8	-12.1	-13.9	-15.7	-8.9	-6.6	-13.3	-9.3	-1.3	♦ 3.6	♦ 0.5
Eastern Europe[c]	-2.5	-6.6	-6.6	-7.8	-6.9	-4.1	-4.0	-4.5	-2.3	2.5	♦ 2.4
Soviet Union	-0.3	-5.5	-7.3	-7.9	-2.0	-2.5	-9.3	-4.8	1.0	♦ 1.1	-1.9

Source: UN/DESD, based on data of IMF and international sources.

♦ Indicates break in series.

[a] Expenditure basis (negative of balance of payments in goods, services and private transfers, excluding investment income).

[b] Preliminary estimate.

[c] The former German Democratic Republic is included in eastern Europe until 1990 and as part of Germany thereafter.

In much of the 1980s, the major feature of the net transfer of financial resources of the industrialized countries was the large inflow of resources to the United States and to a lesser extent the United Kingdom. Although Germany and Japan made large outward transfers, they were less than the transfers being absorbed by the other countries and thus the developed market economies as a whole absorbed resources from the rest of the world. The major reason for the $48 billion shift in the net transfers of these countries in 1991 was that the net transfer to the United States fell by $44 billion.

The United States reduced its net intake of financial transfers from several sources, but especially from the developing countries (see table IV.3). Latin America and the Caribbean, in particular, did not make a net transfer to the United States in 1991 for the first time in 10 years. Japan's net transfer to the United States was virtually unchanged, but the United States transferred $18 billion to Europe, probably mainly to Germany, which is a sharp departure from the relative balance of the United States *vis-à-vis* western Europe in the previous two years. Indeed, the world transferred resources on a net basis to Germany, instead of Germany transferring $45 billion to $60 billion abroad as it had done each year since 1986 (table IV.2). The high cost of integrating the eastern *Länder* into the Federal Republic, as discussed in chapter II, is the main reason for Germany's absorption of external transfers.

The changes in the net transfers of major industrial countries in 1991 were accompanied by major changes in the financial flows through which the transfers were effected. One of those changes was unique, namely the $42 billion net drop in flows of official grants from the United States, turning it into a recipient country instead of a donor (see table A.27). This reflected the official transfers to the United States to help finance its participation in the war in the Persian Gulf. In 1992, the flow of official grants is expected to return to normal, and other financing would be needed if the overall net transfer to the United States were to be unchanged.

In fact, United States exports are expected to grow more rapidly than imports in 1992, as a continuing response to the past decline in the dollar exchange rate and the decline in unit labour costs in the United States relative to its major trading partners (see table A.9). The trade deficit and the net transfer are thus expected to decline on this account (perhaps by $20 billion according to the baseline forecast of Project LINK, discussed in chap. I).

Germany and Japan were in the past major sources of financing of the large net transfer to the United States, but the prospects for their playing that role again have dimmed. As noted above, Germany is now an overall recipient of net resource transfers and although Japan's net transfer burgeoned once again last year, the character and direction of its capital flows have changed. Although Japan's net outward transfer grew by $40 billion, its net transfer to the United States was unchanged. Most likely, a significant part of the funds sought the higher earnings available in western Europe.

Table IV.3. Net resource transfers to the United States, by region, 1980-1991

(Billions of dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Canada	-0.5	0.3	7.1	9.0	12.3	13.1	10.2	8.0	7.5	4.4	3.2	--
Japan	9.5	14.5	15.5	24.6	42.1	51.3	52.1	53.4	47.4	40.7	32.4	33.6
Western Europe	-16.7	-9.0	-2.7	5.4	21.4	31.1	34.8	32.2	18.9	1.5	-3.2	-18.0
of which:												
Germany	2.4	2.9	5.3	8.3	13.2	15.9	20.0	21.4	18.2	13.9	16.2	..
United Kingdom	-2.2	1.1	2.9	2.8	3.0	5.3	5.6	4.7	0.1	-4.3	-4.7	-4.5
Latin America and the Caribbean	-2.2	-6.3	4.7	18.0	20.6	16.6	12.7	15.3	10.2	10.7	11.2	--
of which:												
Mexico	-2.7	-5.5	4.2	10.1	7.9	7.5	7.3	8.3	5.5	5.2	4.9	..
Major oil exporters of Africa and Asia[b]	36.7	24.9	5.8	0.8	5.2	3.1	2.3	7.1	5.9	11.3	15.0	6.9
Other developing countries	-4.7	-0.6	1.1	9.4	21.3	22.1	31.6	42.1	34.9	36.0	32.6	26.4
Eastern Europe and USSR	-2.7	-2.9	-2.8	-1.7	-2.1	-1.4	--	-0.2	-1.6	-3.6	-2.2	-2.1
Other countries[c]	-0.1	-4.7	-4.4	-8.0	-11.0	-12.9	-3.4	-4.9	-6.7	-7.6	-7.4	-9.0
Total[d]	19.4	16.1	24.3	57.6	109.8	123.0	140.4	153.1	116.6	93.5	81.7	37.7

Source: UN/DESD, based on data of United States Department of Commerce, Survey of Current Business.

[a] Preliminary; full country breakdown unavailable at this time.
[b] Comprising OPEC member countries, excluding Ecuador and Venezuela.
[c] Including net transactions with international organizations and unallocated amounts.
[d] Differs slightly from total in table A.27 because certain private transfers are unavailable on a geographical basis.

Moreover, Japan did not supply long-term credits on a net basis to the rest of the world in 1991, as it had for most of the 1980s, but instead absorbed them. Foreign purchases of Japanese securities outpaced Japanese investment abroad. Instead, Japan made its net financial transfer by producing a large net outflow of short-term capital (see table A.27). This was brought about, in part, through a reduction in the large amount of short-term foreign borrowing that had been undertaken over the previous five years.[8] Thus, at both the short and the long end of the financial spectrum, Japanese finance seemed to be looking inward to a greater degree than before.

Although involving far smaller flows in dollar terms, major changes are also under way in the net transfer of eastern Europe and the former Soviet Union. Through much of the 1980s, several eastern European economies were debt-constrained and had to curtail imports and push exports--much like the heavily indebted developing countries--and the region transferred resources to the market economies. Since 1990, however, they have been absorbing resource transfers, as the international community has supplied finance and debt relief to assist their transition to market economies. In 1989 and 1990, the Soviet Union also became a net recipient of resource transfers, partly through assistance, but mainly through external credits and use of official reserves. In 1991, reserves were depleted, credit was cut off and the net transfer turned negative. But if the financial assistance proposals for the successor republics that are discussed later in this chapter are carried out, the net transfer to those countries in 1992 will be quite large.

The developing countries did not all share in the $24 billion inflow shown in table IV.2. The "capital-surplus" exporters of oil received $19 billion of the total, largely financed by the sale of official reserves and other assets, as well as by capital-market borrowing, mainly to finance reconstruction after the cessation of the Gulf war. However, the "capital-importing" countries also shared in the inflow. This was the first positive net transfer to that group of countries since the developing-country debt crisis burst open in 1982 (see table IV.4). Considering the large number of countries involved, the size of the transfer was small, only $5 billion, but it represented a swing from a net "negative" transfer of $31 billion in 1990. It meant that imports could increase last year by $36 billion more than exports grew.[9]

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[8] Short-term foreign liabilities of Japanese foreign exchange banks had risen by from $140 billion to $192 billion a year from 1986 to 1989; in the first three quarters of 1991, they fell by $124 billion (data of Bank of Japan, *Balance of Payments Monthly*).

[9] In fact, exports grew by $56 billion and imports grew by $92 billion and the trade balance went from a $16 billion surplus to a $20 billion deficit (see table A.26).

Table IV.4. Net transfer of financial resources to groups of developing countries, 1981-1991[a]

(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Long-term capital importers	51.6	33.7	-4.0	-31.5	-22.3	-12.9	-44.2	-36.3	-38.5	-31.5	4.6
of which:											
Deficit energy exporters	10.2	11.5	-10.0	-23.1	-20.3	-1.5	-21.2	-8.0	-19.6	-32.7	-7.1
Energy-importing countries	43.7	27.7	9.3	-7.5	-14.3	-18.6	-22.4	-31.9	-23.6	12.0	24.2
Recent surplus economies[c]	3.7	-0.5	-4.6	-9.1	-12.1	-23.8	-30.9	-26.6	-22.5	-11.4	-0.6
Other energy importers	40.0	28.2	13.9	1.6	-2.2	5.2	8.5	-5.3	-1.0	23.4	24.8
China	-2.2	-5.5	-3.3	-0.8	12.3	7.1	-0.5	3.6	4.7	-10.9	-12.5
Surplus energy exporters	-46.3	0.5	22.1	8.6	4.4	23.6	9.1	11.9	7.9	-4.9	19.1
All developing countries	5.3	34.2	18.2	-22.9	-17.9	10.7	-35.1	-24.4	-30.6	-36.4	23.7
Memorandum items											
15 heavily indebted countries[d]	20.4	9.4	-23.8	-40.6	-40.6	-22.1	-28.4	-31.1	-37.7	-35.2	-11.5
Africa	15.5	14.7	8.4	2.6	-0.6	6.8	1.0	4.0	3.8	-4.7	-1.2
of which: sub-Saharan Africa[e]	9.1	7.4	5.4	2.3	3.1	5.3	6.3	6.7	6.5	7.0	6.9
Latin America	14.3	3.7	-25.5	-35.5	-30.8	-14.1	-19.3	-22.0	-29.5	-29.7	-13.2

Source: UN/DESD, based on data of IMF, official national and other sources (for memorandum items, see statistical annex, table A.28).

[a] Expenditure basis (negative of balance of payments in goods, services and private transfers, excluding investment income).

[b] Preliminary estimate.

[c] Hong Kong, Republic of Korea, Singapore and Taiwan Province of China.

[d] Argentina, Bolivia, Brazil, Chile, Colombia, Côte d'Ivoire, Ecuador, Mexico, Morocco, Nigeria, Peru, Philippines, Uruguay, Venezuela and Yugoslavia.

[e] Excluding Nigeria.

Most of the change was enjoyed by a group of countries that have been making very large net resource transfers since 1983, illustrated in table IV.4 by a sample of 15 heavily indebted countries that were originally associated with a plan for debt restructuring proposed by the United States in 1985.[10] The net transfer of this group improved by $24 billion. It was still negative, however, by more than $11 billion; i.e., there was a surplus in the balance of trade in goods and non-capital services of this amount. Countries had received a larger net transfer in financial terms--i.e., the net inflow of capital minus the net payments of income to capital left these countries with a surplus of $8 billion, the first surplus on this account since 1981--and they took the opportunity to build up their foreign reserves by $20 billion (see table A.28). They thus ended the year with reserves sufficient to cover almost four months of imports of goods and services (table A.29).

Aside from these countries, most changes in the net transfer in 1991 were not large. One exception was that of the grouping of "recent surplus countries", which in chapter II was identified as the first generation of Asian exporters of manufacturers. The growth of exports from these countries to the more slowly growing world economy did not keep pace with the growth of imports, maintained in particular for investment purposes, and so the resources available for foreign transfer virtually disappeared.

Aid, finance and debt of the developing countries

The financial side of the net transfer of resources of the developing countries has changed as dramatically as the change on the expenditure side (see table A.28 for details). The largest change has been in the inflow of short-term funds and the outflow of funds from the developing countries themselves.[11] The change was especially evident in Latin America, where a combined net outflow on account of these two categories of $9 billion in 1990 became an estimated net inflow of $16 billion in 1991. The change reflects the success of stabilization programmes in some countries and the return of investor confidence, as well as some speculative capital inflows (see chap. II for additional details).

The net transfer through direct investment continued its upward trend last year, particularly on the strength of resurgent flows to Latin America. In part, these were associated with privatization-*cum*-debt restructuring, as noted below in the discussion of foreign debt. But there has also been an increasing perception of long-term investment opportunities in manufacturing and services.

The return of investor confidence in Latin America carried over to the international credit markets as well, perhaps best symbolized by the successful flotation in October of a 10-year Euro-bond issue by Mexico's national development bank. The interest rate on the bond, however, embodied a 3 percentage point premium over 10-year United States treasury bonds, so the finance was expensive. But the maturity of the bond shows the market's vote of confidence in Mexican policy and the economy's medium-term prospects.

Indeed, developing country activity on international financial markets has resumed

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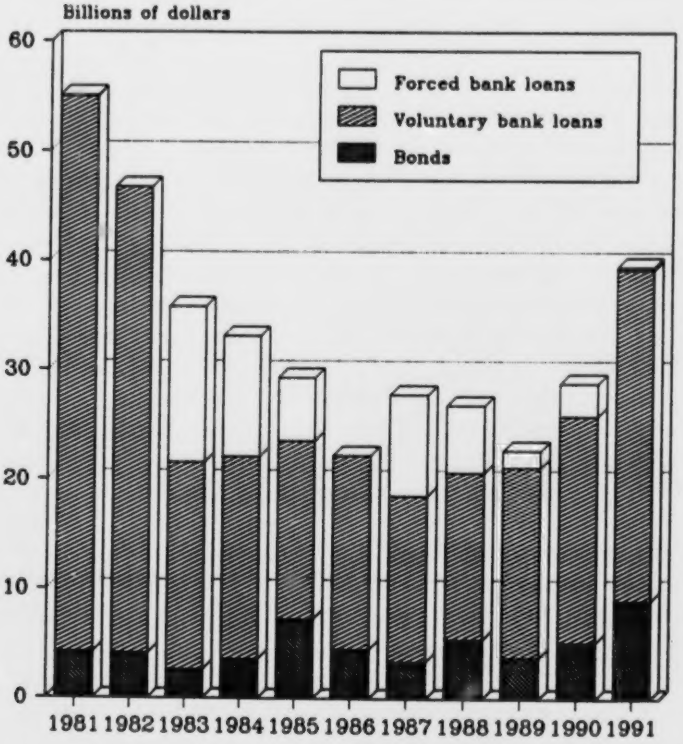
[10] Given that 10 of the 15 countries are Latin American, a comparable change is seen in the Latin America and the Caribbean grouping in table IV.4.

[11] Data on these flows are the most difficult to track in balance-of-payments data and are calculated in table A.28 as a residual. They nevertheless correspond to anecdotal evidence and the national data that are available.

(see table A.31). This is most clearly seen when one focuses on loans made "voluntarily", i.e., when credits that were part of debt-restructuring packages are excluded (see figure IV.3). On the other hand, access to the market is quite limited. The developing countries served are primarily Asian, although Latin American borrowers took almost $6 billion in credits last year. Asian borrowers accounted for 78 per cent of the developing country bank loans and bond issues arranged in 1991. African countries have barely any access to the markets. For them and for others with limited access to private credit, official finance is crucial.

Figure IV.3. Gross borrowing on international capital markets by developing countries, 1981–1991



Source: Data of OECD.

Official finance for development

Official finance swelled in 1990 and 1991, principally owing to the expansion of grants to countries seriously affected by the situation between Iraq and Kuwait. In 1990 grants more than doubled to $29 billion and in 1991 they rose to $32 billion (table A.28). This year they will begin to fall back as the international crisis ebbs, but the need for highly concessional development assistance remains.

Not all developing countries require financing on the highly concessional terms of official development assistance (ODA); some developing countries even provide assistance to other countries. Arab countries, in particular Kuwait and Saudi Arabia, have consistently been substantial donors (see table A.32). But in some countries, poverty is extreme and warrants international assistance. This is especially the case in the countries needing to reconstruct in the aftermath of the self-torture of civil war. Additional assistance is also necessary if low-income countries are to be able to undertake their proper global responsibilities in environmental protection and clean-up.

Policy makers agree that insufficient aid is being provided at this time. Donor country authorities have been explicit:

> "...Members [of the Development Assistance Committee (DAC)] recognize that in view of the huge development tasks ahead, particularly given the strong efforts towards democratization and economic policy reform throughout the developing world, substantial additional aid efforts will be required both quantitatively and qualitatively..."[12]

Some treasuries and legislatures, however, have been hard to convince. Perhaps governments erred in arguing for ODA as a policy tool in the Cold War when, in fact, the best case for ODA is the simple one of human solidarity.

The real value of ODA actually declined in the second half of the 1980s (table A.32). DAC countries increased their aid flows by over 1 per cent a year, on average, but other donors were not able to maintain their aid efforts, particularly the capital-surplus oil exporting countries. Available evidence suggests that the real value of total ODA in 1991 was the same as in 1990. The prospects for the years ahead are not encouraging. Although many donor countries in the DAC and some new donor developing countries will seek to raise their ODA commitments, other donor countries do not seem to be in a position to do so. Certainly, the former Soviet Union and the countries of eastern Europe are not able to maintain the aid programmes that their predecessor states and governments provided.

A major test of the prospects for ODA lies in the negotiations currently under way for the Tenth Replenishment of the International Development Association (IDA), the concessional lending facility of the World Bank. Donor governments have looked to the Bank to take the lead role in mobilizing and coordinating official assistance.[13] To be credible in this role, IDA needs to be able to commit substantial amounts of its own resources to a country's lending programme. IDA is primarily financed through multi-year replenishments, although repayments of past IDA credits and transfers from the net income of the World Bank on its non-concessional lending are also made available for IDA lending. The current replenishment went into effect on 23 January 1991, when sufficient commitments were received from donor governments, and it is to last until June 1993.[14]

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[12] Communiqué of the High-Level Meeting of the Development Assistance Committee of the Organisation for Economic Co-operation and Development, Paris, 3-4 December 1991, para. 9.

[13] In the case of least developed countries, this is done in conjunction with the United Nations Development Programme, which is responsible for organizing "round table" meetings of donors (see *The Least Developed Countries: 1990 Report* (United Nations publication, Sales No. E.91.II.D.3), pp. 19-21).

The Tenth Replenishment will cover the period July 1993 to June 1996 and ought to entail a substantial increase over the Ninth Replenishment in real terms. In addition to meeting the needs of the long-term IDA recipients, resources will be needed for new low-income member countries. Eight were admitted to IDA membership since the Ninth Replenishment went into effect, not counting successor states of the Soviet Union admitted at the time of the Development Committee meeting in April 1992. Moreover, increasing demands may well be put on IDA to fund environmental projects as part of the global initiatives that are expected to be agreed at the United Nations Conference on Environment and Development in Rio de Janeiro in June.[15]

It is unclear whether an adequate replenishment will be agreed. One encouraging development is that the delayed replenishment of the Asian Development Fund, the concessional window of the Asian Development Bank, was agreed in December 1991. This Sixth Replenishment will combine $4.2 billion in new commitment authority and a residual $1.5 billion that were not committed under the Fifth Replenishment.

Another positive sign is that multilateral concessional assistance has been rising. IDA itself committed over $7 billion in loans in 1991, up from under $5 billion the year before and the operational agencies of the United Nations accorded grants of $4 billion, up from under $3 billion in 1990 (table A.34). The IDA increase included added financial flows to the countries seriously affected by the Gulf crisis and the beginning of the second phase of the Special Programme of Assistance to Sub-Saharan Africa. In this programme, which covers 1991 to 1993, 18 donors pledged $7.4 billion in bilateral co-financing or "coordinated financing" of IDA lending. The net flow of concessional lending by the International Monetary Fund (IMF) also rose appreciably last year to $1 billion, after having been nil the year before (table A.30).

A troubling sign, however, is the delay in implementing intergovernmental commitments for three multilateral financing initiatives: the $1 billion capital increase of the International Finance Corporation (the affiliate of the World Bank that lends and takes equity stakes in private-sector projects), the Ninth Quota Review of IMF, which will raise Fund lending resources by 50 per cent, and the $1.2 billion Multilateral Investment Fund, which was to be administered by the Inter-American Development Bank.

The IMF quota increase has become an especially serious matter as a sharp deterioration in the liquidity of the Fund will result if the Fund meets expected demands on its resources, especially with regard to those of the new member countries that emerged out of the former Soviet Union. Implementation of the quota increase is contingent on a sufficient number of members approving both the quota increase itself and a proposed third amendment to the Fund's Articles of Agreement concerning treatment of members in arrears on repayment obligations to the Fund that were not cooperating with the Fund to clear the arrears. To be adopted, the quota increase itself needs approval by members holding at least 70 per cent of the quotas existing when the Board of Governors approved the proposed increase, 30 May 1990 (an 85 per cent majority had been required until 30 December 1991). As of late April 1992, a 75 per cent majority had approved the increase and so the quota increase will be approved as soon as the third amendment is adopted. The latter requires approval by three fifths of members having 85 per cent of quotas. As of late April, members holding more than 30 per cent of the quota votes had not acted. The United States has not acted on either proposal, but when it does the quota increase will go into effect.

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[14] It had been scheduled to become effective at the start of July 1990, but the process of legislative ratification was not timely enough in all countries and interim financing had to be arranged (see World Bank, *Annual Report, 1991* (Washington, D.C., August 1991), pp. 77-78).

[15] Such funding would go well beyond the modest and experimental Global Environment Facility (GEF), jointly operated by the World Bank, the United Nations Development Programme and the United Nations Environment Programme. The facility, which has $1.3 billion to commit over three years, provides grants for investment projects, technical assistance and applied research in the areas of global warming, pollution of international waters, destruction of biological diversity and depletion of the ozone layer. Indeed, on 30 April 1992 an agreement was reached to restructure the GEF, expanding the scope of projects to include land degradation issues, and also making it possible for an expanded GEF to function as "the funding mechanism for global environmental conventions, should the parties to those conventions so desire" (*World Bank News*, 7 May 1992, p. 6).

In the case of the Multilateral Investment Fund, the Congress of the United States did not agree to the Administrations's $500 million funding request in a vote on 2 April 1992. The United Kingdom contribution was also stalled in Parliament, while France, Germany, Japan, Spain and a few Latin American donors had approved their respective shares. As a result, the Fund, which had already been constituted, was suspended, since the agreed contributions were conditional on participation by all prospective donors. The Fund had been proposed by the President of the United States as part of his Enterprise for the Americas Initiative and was to finance technical assistance, human resources and enterprise development projects.

Another multilateral institution that supports enterprise development, the International Finance Corporation (IFC), cut back its commitments in 1991 for the second year in a row (table A.33), in part because of the capital constraints on the facility. The IFC's Board of Directors had approved almost a doubling of the institution's capital in June 1991, but only after a protracted delay. The target for implementing the capital increase was 31 December 1991, but it was not met. Finally, notice of United States Government approval was received by IFC on 4 May 1992 and the funding increase went into effect.

In contrast, lending commitments of the Inter-American Development Bank (IDB) jumped for the second year in a row, as its capital increase that was agreed in 1989 for 1990-1993 went into effect. In addition, in 1991 IDB was able to begin to offer loans for a new purpose, namely to buy back publicly guaranteed commercial bank debt at a discount or to buy financial instruments that would serve as collateral in debt and debt-service reduction agreements (see below).

Lending by IMF also rose appreciably in 1991, in part for the countries in transition from central planning to market economies, discussed below. But lending to the developing countries rose considerably as well and became positive on a net basis for the first time since 1985 (see table A.30). Over $1 billion of net lending was under the Compensatory and Contingency Financing Facility, the bulk of it under the temporary oil element, part of the Fund's response to the crisis in the Middle East. Another $1 billion of net lending took place on concessional terms, primarily for African countries undergoing structural adjustment programmes. The total net flow was nevertheless only $1 billion because other countries were making net repayments, particularly Latin American borrowers. The largest net repayments were made by Argentina, Brazil and Chile, while some countries that had concluded major debt reduction agreements in 1990 that included IMF-supported enhancements were still drawing from the Fund on a net basis (Costa Rica, Mexico and Venezuela).

Status of the debt situation in the developing countries

At the end of 1991, the total stock of debt owed by the capital-importing developing countries was virtually unchanged from a year earlier (see tables A.35 and A.36). The addition to the debt stock from net lending of an estimated $38 billion was offset by debt reduction of about $22 billion plus a valuation change.[16] In dollar terms, the total amount of debt remained at about the level of 1987; however, as a share of GDP it fell from 50 per cent in 1987 to 36 per cent, although in 1991 it showed little change from 1990. The debt-to-export ratio was also a little lower at 133 per cent compared to 134 per cent in 1990.

Africa's total debt decreased slightly, reflecting in part a large write-off of the debt owed by Egypt. This helped reduce the debt-to-export ratio for Africa as a whole by about 3 percentage points.[17] The debt stock of sub-Saharan Africa increased slightly. Although its debt-to-GNP ratio declined by roughly 5 percentage points, the debt-to-export ratio increased by nearly 13 percentage points owing to poor export earnings. About the same magnitude of reduction of the stock of debt as in Africa was seen in Latin America, reflecting debt negotiations in 1990 and debt conversion schemes. A notable case was Argentina, where proceeds from the privatization of telephone and airline companies agreed in 1990 effectively eliminated $7 billion of debt. The debt stock of Asian countries grew, reflecting their market access. This increase was balanced by their strong export performance, causing a further decline of their debt-to-export ratio.

Breaking with convention in official debt restructuring

The seven major industrial countries, the Group of Seven, the leading bilateral official creditors of the developing countries, recognized last year that debt relief "well beyond Toronto terms" was needed for the lower income countries whose debt burden was high.[18] However, the seven could not reach consensus on how much to improve the terms of relief, mainly due to the hesitation by the Governments of Japan and the United States to endorse a proposal of the United Kingdom, known as the "Trinidad terms". The key principle governing the joint debt relief operations of these countries--and the other participants in the Paris Club where official debt is renegotiated--is to equitably share the costs of granting relief. When straightforward consensus on the terms of relief is unattainable, complicated compromises result, as in 1991.

The Toronto terms allowed for a partial write-off of capital, reduction of interest rates or an extension of maturities, but debt relief was negotiated on an annual basis, necessitating repeated and time-consuming negotiations. Also, the grant element of arrangements under the Toronto terms averaged only 20 per cent. The Trinidad terms, which were proposed by the British Chancellor of the Exchequer at a Commonwealth meeting in September 1990, would have a much greater impact. They would cancel two thirds of the stock of outstanding bilateral official debt in a single operation, with the remaining one third to be rescheduled over 25 years; and they would capitalize interest payments due in the first five years, to be paid later in a phased manner depending on a debtor country's ability to pay. If all creditors implemented debt relief on these terms, debt of around $17 billion would be written off out of a total $26 billion for some 20 eligible countries.[19] The "eligibility" criteria include low income levels, high-debt burden and having a current economic programme with IMF. After failing to win approval of the Group of Seven, the United Kingdom announced its unilateral implementation of the Trinidad terms in October 1991 and Canada agreed to do the same.

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[16] As the exchange rate of the dollar at the end of December 1991 was higher than at the same point in 1990, the dollar value of Deutsche mark, yen and other debt was reduced in 1991.

[17] The debt-to-GNP ratio increased slightly, due partly to the more than 100 per cent rise in the Algerian dinar price of the dollar, which reduced its GNP value in dollar terms.

[18] *London Economic Summit 1991*, Economic Declaration, 17 July 1991, para. 44.

In response to the call by the Group of Seven to soften the terms of debt rescheduling for highly-indebted low income countries, the Paris Club did introduce new, exceptional terms towards the end of 1991. Creditors could choose from two variants: (a) 50 per cent cancellation of repayment obligations with the other half consolidated at market rates, to be paid over 23 years, with six years of grace; and (b) consolidation of loans at concessional rates, so as to reduce payments due by 50 per cent in net present value, to be repaid over 23 years without a grace period. When the Paris Club offers the new terms to a debtor, there is still a third option for any creditor country not wishing to participate in the new terms. It is an option that was also available to creditors under the Toronto terms, namely consolidation of loans at market rates to be repaid over 25 years with a grace period of 14 years.[20] These new terms were applied to agreements with Benin and Nicaragua in December 1991 and Bolivia and the United Republic of Tanzania in January 1992.

The new Paris Club terms followed another major development in the restructuring of official debt. This was the agreement in the first half of 1991 to write off up to 50 per cent of the debt owed by Egypt and Poland. It set a precedent that the arrangements for low-income countries built upon. These cases included several major changes from the past Paris Club agreements with severely indebted middle-income countries. First, the entire stock of eligible outstanding obligations was consolidated. All previous Paris Club agreements, except for the Ghana agreement in 1974, had dealt only with debt-service payments falling due during a certain period of consolidation. Second, the interest payments were uniformly reduced during the first three years of the agreement. Third, non-concessional debt was rescheduled on highly concessional terms. Fourth, the basis of debt relief was the net present value (NPV) of scheduled debt-service payments. In this way, burden sharing among creditor countries would be more equal because each bilateral agreement had to achieve the same percentage reductions of NPV. Fifth, the benefits are "front-loaded"; i.e., the schedule of principal payments increases annually from a very low level and more than offsets annual declines in interest payments, so that the total debt-service payment grows over time. Last, the debt relief is phased, so as to provide a continuing incentive to meet the targets of IMF programmes and those set under the Paris

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[19] Commonwealth Secretariat, *International Capital Markets*, vol. 11, No. 5 (December 1991), p. 24.

[20] Restructuring pertains to obligations falling due over up to 30 months plus arrears, although a "good will" clause leaves open the possibility of comparable treatment of obligations falling due after the "consolidation period" (see Thomas Klein, "Innovations in Debt Relief: the Paris Club", *Finance and Development* (IMF/World Bank), March 1992, pp. 42-43).

Club Agreements. The full 50 per cent reduction in NPV will be granted only after three years of satisfactory performance. Eligible maturities covered by these agreements were estimated at $30 billion for Poland and $28 billion for Egypt, including $7 billion cancelled earlier by the United States.[21]

A final exceptional arrangement under the Paris Club machinery was that for Peru. It rescheduled all the arrears incurred on eligible debt, including previously rescheduled debt. In effect, it restructured virtually the entire stock of long-term intergovernmental debt and export credit debt. There are two special features in this agreement. One is that all the moratorium interest due during the consolidation period will be deferred. Another is that repayment of arrears on long-term debt contracted after the cut-off date of 1 January 1983 will be made in equal semi-annual instalments from 30 June 1993 to 31 December 1998. The deferment is contingent on Peru's performance under an IMF "rights accumulation agreement", which is comparable to the stand-by arrangements a country would have with the Fund were it not in arrears to the Fund.[22]

Finally, a significant development at the regional level has followed from the announcement by the President of the United States of his Enterprise for the Americas Initiative (EAI) in June 1990. The Initiative would provide debt reduction, investment and free trade to accompany free-market policy reforms in Latin America and the Caribbean. Under the Initiative, concessional debt that arose from food and development assistance loans would be exchanged for a new debt obligation with a reduced face value, which would not be eligible for further restructuring or rescheduling. The discount or the amount of forgiveness would be determined on a case-by-case basis. The new debt instruments would carry a concessional interest rate. The Initiative also includes a component that would enable non-concessional debt owed to the United States to be reduced somewhat. In addition, it has a provision for debt-for-nature swaps. Three countries received the reduction in their food-aid debt in 1991, Chile in June and Bolivia and Jamaica in August. Overall, including provisions outside the EAI, the United States Government agreed to forgive more than 90 per cent of its bilateral debt with Guyana, Honduras and Nicaragua, around 70 per cent of that owed by Bolivia and Haiti, 25 per cent of that of Jamaica and 4 per cent of Chile's.

Maintaining the strategy for commercial bank debt

In recent years, the negotiations to restructure the debt owed to international commercial banks have mainly been conducted under the "Brady initiative", named after the Secretary of the Treasury of the United States who proposed it in 1989. The centrepiece of the plan was voluntary bank acceptance of negotiated debt and debt-service reduction--as opposed to postponement through rescheduling--with enhancements offered to the banks in the form of earmarked bonds and other partial guarantees of remaining obligations.[23] Negotiations over the past year have, in essence, continued to implement the plan, although the negotiating process has sometimes been protracted.

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[21] World Bank, *World Debt Tables, 1991-92*, vol. 1 (December 1991), pp. 62-64.

[22] The procedures evolved by the international community to clear arrears owed to IMF and the World Bank were discussed in *World Economic Survey, 1991* (United Nations publication, Sales No. E.91.II.C.1), pp. 157-158.

[23] Experience under the Brady Plan until March 1991 was reviewed in *World Economic Survey, 1991...*, pp. 160-169.

The **Philippines**, for example, reached a new agreement with its creditor banks on the framework for a second "debt and debt service reduction" (DDSR) arrangement in February 1992, which replaced the September 1991 agreement. This is to be the second phase of a two-part arrangement, the first part of which was signed in January 1990. The replacement of the September agreement was necessitated because the Philippines did not achieve the economic targets agreed with IMF and its financial assumptions needed recalculation when no accord was reached to continue United States leases of military bases in the Philippines. None the less, the February agreement was not very different from the one it replaced. The agreement covers $5.2 billion of the country's commercial bank debt.

The package provides creditor banks with three choices for exchanging their bank claims for debt-conversion bonds: (a) a package of new money and conversion bonds that are not collateralized, where for each dollar of new money committed, four dollars of eligible debt may be converted to bonds; (b) par bonds paying low but rising interest rates; and (c) collateralized par bonds with longer maturities and low interest rates. Those banks that do not want to provide new money will choose the second or third option. Both the conversion and new-money bonds under the first option have a maturity of 17 years with five years of grace and carry an interest rate of LIBOR plus 13/16 percentage points. The bonds under the second option mature in 15 years with seven years of grace. The interest rate on these bonds starts at 4 per cent for the first two years, rises to 5 per cent in the next two, and to 6 per cent in the sixth year. From the seventh year onward, the interest rate will be LIBOR plus 13/16 per cent. These bonds have a 12-month rolling interest guarantee of up to 6 per cent for six years. The bonds offered under the third option will have a 25-year bullet maturity and be collateralized with zero-coupon United States treasury securities. The interest rate will be 4.25 per cent initially, then gradually increase to 6.5 per cent in the sixth year, which will be maintained thereafter. These bonds will have a 14-month rolling interest guarantee of up to 6.5 per cent. The Philippine Government will pay a fee of 1/8 of 1 per cent on the new money committed by the banks. There is also a provision for the buy-back of up to $1 billion of the commercial bank debt prior to the bond conversion at a discount of 48 per cent, except for most of the debt incurred in the construction of a nuclear reactor at Bataan that, it was later charged, was unsafe and has been "mothballed". The discount on the Bataan-related debt will be 57 per cent.

The DDSR agreement for **Nigeria** was concluded in January 1992. The package initially consisted of three options: (a) a cash buy-back of eligible debt at a 60 per cent discount; (b) exchange with collateralized par bonds with a 30-year maturity at a low interest rate; and (c) provision of new money and conversion to non-collateralized par bonds with a 20-year maturity. The bonds under the second option are collateralized with zero-coupon United States treasury securities. The interest rate starts at 5.5 per cent for the first three years and rises to 6.25 per cent thereafter. The bonds will have a 12-month rolling interest guarantee and "Payment Adjustment Warrants", which depend on the international price of crude oil after November 1996. Under the third option, banks were asked to provide 20 per cent of the amount of conversion in new money. The interest rate on the bonds under the third option is fixed at LIBOR plus 1/16 of a percentage point. The new money will carry interest at LIBOR plus 1 percentage point and will be payable over eight years after six years of grace.

Subsequently, the participating banks made their choices and none took the third option involving provision of new money. Of $5.3 billion restructured, $3.3 billion were converted under the first option of cash buy-back and the remaining $2 billion were exchanged for collateralized par bonds under the second option.

The debt negotiations of **Brazil** have perhaps been the most difficult. An agreement was reached in April 1991 that covered the interest arrears of Brazil accrued during 1989-1990 and totalling $8 billion, plus $0.5 billion of late interest charges. Under the agreement, one quarter of the interest arrears was paid in instalments. The remaining three quarters of the arrears and the late interest charges are to be exchanged for dollar-denominated bearer bonds, maturing in ten years with three years of grace. The bonds will be issued upon agreement between the commercial bank advisory committee and Brazil on the treatment of its medium-term and long-term debt. There will be two options for the interest rate on the bonds. One will pay fixed interest during the three-year grace period, starting at 7 13/16 per cent in the first year, rising to 8 3/8 per cent in the second year and 8 3/4 per cent in the third year. The interest rate during the seven-year amortization period will be at LIBOR plus 13/16 per cent. The second option will offer variable rates that will fluctuate between limits for the first five years and then the rate will be at LIBOR plus 13/16 per cent as in the first option. The bonds will be eligible for swap under Brazil's privatization programme, as well as under other types of investment programmes that Brazil may establish. What remains is to settle the restructuring of the medium-term and long-term bank debt itself. After being on and off for some time, negotiations were resumed in late January 1992. Right after the resumption, Brazil received a long-awaited $2.1 billion stand-by facility from IMF. One quarter of this loan will be set aside for enhancements to support the debt-reduction component of the agreement.

Argentina, like Brazil, has been in a protracted negotiation process with its commercial bank creditors. Argentina finally reached an outline accord with its creditor banks in early April 1992. The agreement covers $23 billion of medium-term debt and $8 billion in interest arrears. The banks holding the medium-term debt may exchange it for: (a) 30-year bonds at a 35 per cent discount from the face value, with interest at LIBOR plus 13/16 percentage points or (b) 30-year bonds with the same face value as the debt, with interest rates rising in steps from 4 per cent in the first year to 6 per cent in the seventh to the final year. They have a 12-month interest guarantee. As for the arrears, Argentina will pay $400 million in cash and $300 million worth of Argentine zero-coupon notes, fully collateralized by United States treasury paper, when the deal is completed. The rest of the arrears will be settled by the issue of 12-year Argentine bonds carrying interest at LIBOR plus 13/16 percentage points. The bonds will amortize in 19 semi-annual instalments starting after three years.

IMF had approved a $1 billion stand-by arrangement for Argentina in July 1991. Following the review of the programme under that arrangement and the strong progress that Argentina had made towards the stringent targets set with IMF, a $3 billion arrangement was approved under the Fund's extended facility. It is anticipated that this will prompt additional lending from such sources as the Inter-American Development Bank and the World Bank. Some portion of the funds can be set aside for "enhancements" to guarantee the concessional bonds exchanged for bank debt under the Brady Plan restructuring.

Other debt conversions

Outside the negotiations under the international debt strategy, both large- and small-scale debt conversions have continued to take place. Large-scale debt-for-equity swaps were seen especially in conjunction with privatization measures and there have been some developments in debt-for-nature swap schemes.[24]

The largest debt-equity swaps were made in conjunction with the privatization of the national telephone company and airline in **Argentina**. They converted $7 billion of the country's commercial debt into equity and reduced the debt stock by 6 per cent in 1991. In **Venezuela**, $295 million of debt were swapped for $243 million in direct investment in two large petrochemical projects by a group of United States and European banks. The two swaps represented 40 per cent of the debt conversion that the Government had approved in petrochemicals. The Government of Venezuela has also authorized debt conversions for projects in mineral extraction, aluminium, tourism, paper and pulp and infrastructure.

In **Brazil**, funds were set up to invest in privatization through debt conversion. Both were launched by a group of commercial banks and will use Deposit Facility Agreements (DFA) from commercial bank portfolios for the privatization. DFAs are matured debt, which are held at the central bank, and according to the privatization programme, DFAs are discounted by 25 per cent. However, foreign participation has been limited, as foreign bankers wait to see the terms of settlement of the DDSR negotiation rather than convert DFAs at a 25 per cent discount into shares in a private company, which they would have to hold for some years. Only 2 per cent of the $1.7 billion in privatization thus far has been paid in foreign debt paper.

In the realm of debt-for-nature swaps, one notable development in 1991 was the purchase and redemption of the debt of a multilateral institution, the Central American Bank for Economic Integration. It was purchased by an environmental non-profit organization in order to acquire and protect land at the International Children's Rainforest in **Costa Rica**. In addition, two international commercial banks donated debt claims of $6 million and $1 million to non-governmental organizations working for conservation in developing countries. The $6 million arrangement, by a United States bank, represents the largest donation of its kind since 1987 when debt-for-nature swaps were first introduced. The other donor was a Japanese bank, marking the first operation of its kind by Japanese banks.

The Enterprise for the Americas Initiative noted above also has a provision for building an environmental fund by using the local-currency equivalent of certain interest payments. Chile became the first beneficiary of this scheme in late February 1992. The interest due this year on a $38 million official development assistance loan will be deposited into the fund. The operation could help accumulate some $30 million in the fund over the coming ten years. In a multilateral initiative, the Inter-American Development Bank (IDB) has allocated $400 million to a pilot programme called the Special Financing Modality for Environmental Projects. Under the programme, IDB will lend money to its member countries to purchase commercial debt.

Ten years of debt crisis

In 1982, the foreign debt situation of the developing countries became a focus of international attention in the midst of a major global economic slow-down. One fear in the industrialized countries was that a liquidity crisis in large debtor countries would bring down several of the world's main commercial banks and severely disrupt international commerce and payment systems. The initial international policy response to the crisis was to strengthen the credit lines that IMF could bring to bear on the problem and help troubled debtors through what was expected to be a short-run problem. The global banking crisis then passed, but the developing country debt crisis remained.

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[24] There have been other operations, too, including a second debt-for-education swap by Harvard University, this time to benefit Mexico, following an arrangement for Ecuador in 1990.

As it became clearer that the world economy of the 1980s would differ appreciably from that of the 1970s, it was realized that fairly deep structural adjustments were required in the economies of the heavily indebted countries. This was the case both for low-income countries principally indebted to official creditors and middle-income countries whose main creditors were international commercial banks. As far as debt relief was concerned, the principal idea was that breathing space was needed in which to undertake the reforms, after which countries would return to full creditworthiness. Debt servicing needed to be postponed, perhaps for several years, but debtors were generally considered to be solvent.

As the 1980s wore on, it became evident that this policy strategy, too, was over-optimistic. Debtors continued to have difficulty fully servicing their debts. Adjustment programmes were repeatedly redesigned, and the social costs of adjustment became more salient. Arrears to banks and governments became more prevalent. And banking supervisors increasingly required the banks to treat their loans to debt-crisis countries as "value-impaired". A secondary market arose on which bank claims on countries with debt-servicing difficulties were traded and by 1989, claims on the major debtor countries sold at about 30 per cent of face value (see figure IV.4 for the average secondary-market bid on the debt of the 15-country sample noted previously). Bids on the debt of some low-income countries fell as low as one cent on the dollar, and mostly they disappeared from the market.

Today's international debt strategy recognizes that many heavily indebted countries cannot work themselves out from under their "debt overhang" and that some of the debt has to be written off as uncollectible, which creditors have increasingly been willing to do when debtor countries undertake the structural changes that are required for adjustment. The specific techniques for debt reduction have become extremely complex and varied, primarily to accommodate banks and official lenders operating under different legal, tax and regulatory systems.

Although in application the new strategy has not brought about a major net reduction in the debt itself, progress towards resolution of the debt problem seems well on its way. Certain heavily indebted countries, principally in Latin America, that had been closed out of the financial markets are again considered creditworthy, if at the price of a considerable interest premium and restricted calls on the market for funding. Secondary market quotations on bank debt have risen, especially in 1991, albeit not all the way back to the levels of 1986.[25] The apparent return of flight capital in some of the countries also points to renewed confidence in these economies. The situation in many smaller economies, however, still seems fragile.

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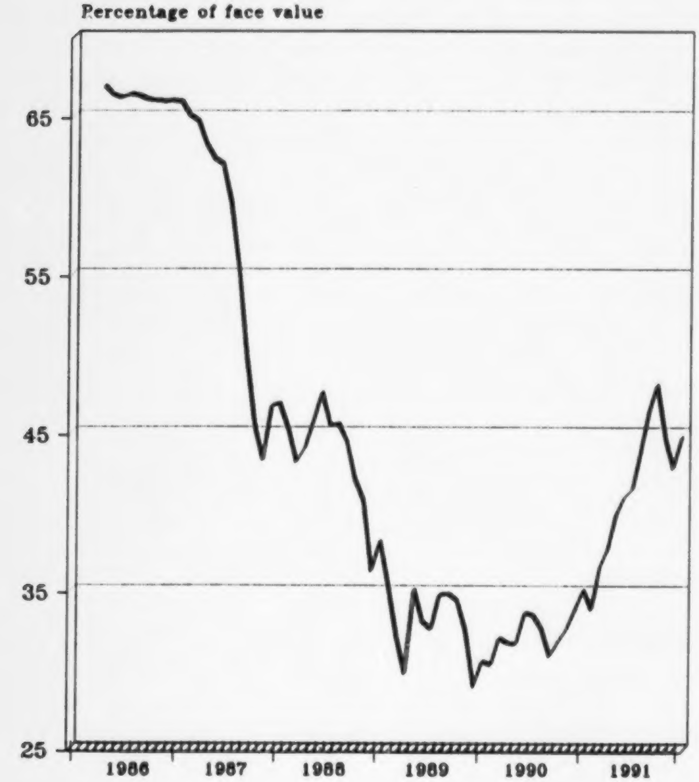
[25] Although the market is considerably deeper than it used to be (e.g., trading in developing country paper is said to have exceeded $100 billion in 1991, compared to $65 billion in 1990), it is still moved by speculative as well as "real" developments. Thus, while higher prices on the debt of Chile, Costa Rica and Mexico reflected improvements in the debt situation of those countries, increases in the prices of Argentine and Brazilian debt last year were in anticipation of reaching a debt accord. These higher prices before the fact reduce the discount on the debt in the final agreement and raise the cost to the debtor and its official creditors of the agreement actually reached.

Figure IV.4. Market bids on bank debt of 15 developing countries, 1986-1991



Source: UN/DESD, based on data of Salomon Brothers, New York.

To some the evidence that the debt situation has improved is still tenuous. As a case in point, the debt-servicing ratios of major groupings of developing countries have improved considerably in recent years (see table A.36), but this can be attributed to factors other than the progress in negotiated debt restructuring. First, dollar interest rates, on which much of the interest on commercial bank debt is calculated, are at unusually low levels (see table A.8). When industrial countries begin their economic recovery these rates will rise again. Secondly, for some debtor countries, the debt agreement has mainly regularized the cash flow they had without an agreement. Arrears on interest payments in Latin America and the Caribbean alone were estimated to have reached $25 billion at the end of 1991.[26] A debt agreement is, however, superior to arrears even if the cash flow is roughly the same because arrears entail reduced access to trade finance and official funds.

This notwithstanding, the big improvement in the net transfer of resources of the heavily indebted countries in 1991 indicated what seems to be the principal benefit of the debt regularization process, i.e., new direct investment, the return of flight capital, foreign portfolio investment, and new lending. What is crucial is that these new flows continue and that depends on the prospects for export earnings and thus the growth of the world economy, the unhampered access to major markets, continued progress in adjustment reforms with greater social equity, and political calm.

Finance for the transition to new market economies

The countries of eastern Europe and the former Soviet Union are redesigning and reforming all the institutions of economic life. In the financial realm they are introducing commercial banks, central banks as they exist in market economies and financial markets to undertake functions that for the most part did not exist under central planning. These institutions will have the major responsibility for mobilizing saving--foreign as well as domestic--and allocating it to investment. To some degree they are a prerequisite to the effective application of the financial resources that the donor and creditor community is committed to providing. If domestic saving is not used efficiently, there is no reason to presume that foreign saving will be either. For that reason the introduction of financial intermediation systems in these countries will be reviewed before the recent international financial flows themselves.

Developing new financial structures

Although some of the economies in transition have been implementing economic reforms for decades, until 1990 they were still essentially working under a central planning model. The essence of a market economy is the decentralization and independence of economic actors who make what are ultimately interdependent decisions. In particular, decisions to save and invest are made separately by a myriad of entities, ranging from large enterprises to small shops, households to government. Resources for investment may be mobilized from the investors' own saving, or the saving of others may be mobilized through equity investment or loans. In the end, the "anarchy of the market" brings saving into balance with investment and allocates saving to a set of investment projects. Markets typically have "distortions" (e.g., adequate information is not available to all potential users), and even when the market is efficient, it is not generally thought to produce a socially optimal allocation of capital; some role is required of government. But the financial sector plays a central role in the investment allocation process and the money that churns through the sector serves the three basic functions of unit of account, means of payment and store of value.

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[26] Economic Commission for Latin America and the Caribbean, *Preliminary Overview of the Economy of Latin America and the Caribbean 1991* (LC/G.1696, 18 December 1991), p. 19.

This sharply contrasts with the subsidiary role of the financial sector under central planning. Almost all decisions on production and distribution were made in physical terms by the planning authorities who would determine the volume and allocation of investment, consumption and production. The effort to achieve consistency was in the derivation of the material balances of the plan. Financial balances, such as for saving and investment, were derived from the decisions in material terms.

The major function of financial institutions was to help implement the production plan. A single state bank served as a combined central bank, issuing currency, and a clearing system for payments to and by enterprises. It advanced working capital to firms to pay labour and other production costs before receipts from planned sales came in. Firms that earned profits (when receipts exceeded advances for production) found them largely siphoned off and used to subsidize the accounts of loss-making firms. Long-term investment was provided by allocations from specialized "banks" that advanced funds for outlays on planned investment projects and monitored implementation of the projects. These banks received their funds from the government budget; the government, in turn, received the funds it allocated largely from the proceeds of the "turnover tax", a sales tax on manufactured consumer goods and the net profits of enterprises. None of the financial institutions acted as independent financial intermediaries, but as administrative agencies of the central government.[27]

Money did not have all the attributes it has in a market economy. It was the means to keep account of economic activity and effect transactions: goods delivered and paid for, work provided and wages paid, and so on. Paying wages in money also gave households some choice in consumption from the range of goods that the central planners provided and, through saving, allowed them to plan consumption over time--or, as goods were often in short supply, forced them to save. Enterprise management, however, did not have the option to plan major investment expenditures. For them, money was not a store of purchasing power and there was no mechanism for accumulating it.

The system of central planning, rational as an ideal, became an administrative nightmare in practice, especially as the planned economies grew more complex. By the 1950s, a halting process of economic decentralization began that eventually touched virtually all the centrally planned economies.[28] To varying degrees, central directives to enterprises were replaced with financial incentives and disincentives and centrally determined, compulsory state orders were as a rule set below capacity, making increased enterprise autonomy possible.

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[27] Savings banks also existed from the early days of central planning. They held household deposits as a service to consumers, but they were not a direct source of credit to enterprises or individuals, other than for housing loans, mainly in eastern Europe. Mostly, their revenues simply were fed into the government budget. A foreign trade bank was also set up, to clear transactions in foreign currency. Some of the centrally planned economies also had a bank of commerce, a maritime bank and a number of co-operative banks. The latter were owned collectively, their function being to serve the needs of handicraft, small farms and shops.

[28] The period through the mid-1980s was reviewed in *World Economic Survey, 1988* (United Nations publication, Sales No. E.88.II.C.1), chap. VI.

The reforms had a significant impact on the financial sector, but only began to prepare it for market economy operations. Thus, while state banks continued to advance credit for planned activities on advantageous terms and routinely covered losses, they were also allowed to make loans for what they judged to be sound activities that were not in the plans. Moreover, specialized long-term investment banks that were set up for important economic sectors in the early stages of reform multiplied and were allowed to extend short-term as well as long-term credit. In addition, self-financing (*khozraschet*) of investment was permitted and enterprises began to rely more on their own and borrowed resources. Enterprises also began to deal directly with each other instead of only through the state planning machinery.

Today, with central planning jettisoned, additional and large steps to restructure the financial system are being taken or discussed in all the transition economies. The first generally accepted goal for the banking system is to separate the state "monobank" into a "two-tier" system comprising a central bank that enjoys a large measure of independence from political influence and several commercial banks that compete for deposits and loans. The specialized banks are also being given a greater degree of autonomy.

Czechoslovakia, Hungary and Poland are farthest advanced along the restructuring path. Independence of the central banks from the Government was legally established in Hungary and Poland in 1991 and on 1 February 1992 in Czechoslovakia when the State Bank Act came into force. Procedures have been established for central bank supervision of the new banking system and for carrying out monetary policy.[29]

It is too soon to judge the effective degree of independence that will be enjoyed by each of the central banks that are or will be established in the transition economies, or how rapidly they can build up their technical competence and their ability to create the confidence of the domestic and international market, which is the bedrock of central banking. One concern in Hungary and Poland, for example, has been that the government deficit has mainly been financed by the central bank, although the degree to which the deficit is monetized has been reduced in Hungary. Moreover, as of early 1992, in none of the countries had the banking system imposed credit discipline on its client banks and enterprises, which were thus operating not all that differently from under planning, at least as far as financial relationships were concerned.[30] An important test of the independence of the central bank will be the willingness of governments to allow flexibility of interest rates, and in particular to allow them to rise to clear markets, as well as to enforce credit discipline.[31]

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[29] For additional details, see Organisation for Economic Co-operation and Development, "Bank restructuring in central and eastern Europe: issues and strategies", *Financial Market Trends*, No. 51 (February 1992), pp. 15-30; and V. Sundararajan, "Central banking reforms in formerly planned economies", *Finance and Development* (IMF/World Bank), March 1992, pp. 10-13.

[30] As of 1 April 1992, bankruptcy laws went into effect in Hungary and Poland, which establish a mechanism–and threat–by which credit discipline might be imposed.

[31] Just as it is the responsibility of the central bank to establish sound financial conditions, it is the function of the government to address the adjustment consequences of establishing them, which may include widespread failures of over-leveraged firms. Bankruptcy procedures need to allow essentially viable enterprises to be protected and reorganized, while inefficient operations are closed with minimal social disruption and maximal redeployment and

It is also too soon to judge the prospects for the commercial banks that were created out of the state banks in each country. It would be an exaggeration to say that a competitive banking market has been created yet in any of the countries. The primary function of loan officers in banks is one that did not exist as such under central planning, namely to assess the creditworthiness of prospective borrowers--including new enterprises or individuals looking to establish enterprises--and the viability of their borrowing plans. Time will be needed to develop ongoing banking relationships with enterprise customers and introduce a set of banking services that local businesses find attractive. On both accounts, a corps of skilled banking personnel and management needs to be developed. Technical assistance in this area is one key benefit from new relationships being established with banks in developed market economies.

In addition, the banks began their existence having inherited considerable "bad debt" on their books (although one positive consequence of the rapid inflation in Poland has been to reduce the real value of such debt). If the stock of bad debt can be kept from growing, the problem can be handled with partial government guarantees, recapitalization of the banks--one of the potential benefits of privatizing them--and innovations such as the *Konsolidační Banka* in Czechoslovakia, which takes over bad debt, and the use of the National Property Fund, under which banks can exchange bad debt for convertible bonds.[32]

In the former Soviet Union, banking reform was still in its formative stage when the Union was dissolved. A central bank that might have gained acceptance was an all-Union system with branches of the monetary authority located in the various Republics, modelled after the Federal Reserve System of the United States. Now it seems that each successor state is building a banking system of its own.

Meanwhile, new commercial banks have proliferated, particularly in the Russian Federation. They are essentially of two types. Several large specialized banks which used to service specific economic branches or industries, such as *Agroprombank* (Bank for the Agro-Industrial Complex), were transformed into unrestricted commercial banking entities with essentially the same range of banking functions. In addition, over a thousand commercial banks have been set up, mostly by enterprises as a vehicle for inter-enterprise financing independently of Government restriction. As a rule they are very small, undercapitalized and vulnerable, since the legal framework for commercial banking has yet to be established. Also, rules for such basic banking principles as collateral on loans and conditions for foreclosure, as well as a system of deposit insurance, do not yet exist. No mechanism has been adopted yet to enforce Central Bank oversight, nor for reliable reporting of bank operations. In this situation, it is feared that many of the new banks would not be able to survive the first wave of bankruptcies and defaults that might follow if, say, subsidies of firms were withdrawn.

In market economies, commercial banks form the essential core of the financial system. They are supplemented by other credit institutions, but also by various financial

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retraining.

[32] The new programmes are to help the commercial banks in Czechoslovakia clean their books of large amounts of "permanently revolving credits for inventories" which they inherited when they were formed from the State Bank. In one option, a commercial bank would transfer an amount of these "assets" to the *Konsolidační Banka* and have an equivalent face value of its liabilities to the State Bank written off. This new bank would then be responsible for collecting payments on these debts, as feasible. In the other option, the commercial bank would swap the assets for a lower face amount of bonds that are convertible into equity in one of the state enterprises that are being privatized.

markets. Important examples are the highly liquid markets for short-term credits. The major actors on these markets are commercial banks that lend each other excess funds for short periods. They also lend or borrow short-term funds from the non-financial institutions in the market, as does the government whose tax and expenditure flows follow different cycles and whose short-term instruments often form the virtual currency of the market. Along with marketable longer-term government bonds, they are virtually risk-free placements of funds, making them ideal for cash management purposes in enterprises. Indeed, central banks generally put monetary policy into effect through "open market operations" in these markets to reduce the money supply by selling government securities and increase it by buying them.

A money market of this sort was introduced in February of this year in Czechoslovakia, when *Statní Banka*, the State Bank, held its first treasury bill auction, selling $450 million worth of 29-day bills. At this time, only commercial banks may buy the bills. Longer-term treasury bonds that are tradable on an informal market will be offered to the public later and are expected to become an important saving instrument. Poland has begun sales of bills drawn on the National Bank itself for short-term monetary management. But the country with the most developed securities market among the transition economies is Hungary, whose Government has been issuing domestic securities since 1983. Maturities range from 30-day treasury bills to 15-year bonds and can pay interest in fixed coupons or using arcane formulas. Nevertheless, securities form only a small percentage of financial assets in the private sector in these countries.[33] In other transition economies, the money markets and government bond markets are at the earliest stages of development, as a functioning commercial banking system is a prerequisite. In time, the banks and enterprises themselves will be a force pushing for their creation.

Stock exchanges, on the other hand, have been established in many of the transition economies, which is curious given the paucity of domestic corporations whose equity shares might be traded on the market. As of the end of 1991, they had begun operation, if on a limited basis, in Bulgaria, Hungary, Poland and the Russian Federation and their opening was planned for 1992 in Belarus, Czechoslovakia, Romania and Ukraine.[34] In the Russian Federation, stock trading is embryonic but 12 exchanges operate. No legislation as yet governs the issuance and trading of shares, although a provisional directive on the matter was issued by the Government at the end of December 1991. The number of stocks traded is miniscule--about 40 companies had their stock quoted, with only five companies listed more or less permanently--and prices fluctuate wildly.[35]

Stock markets may serve more of a symbolic value at the present time than an economic one, perhaps legitimizing in the public eye the new rights of private ownership of the means of production. The reality of establishing clear property rights is, however, far more complex and the economic contribution of stock markets even in developed market economies is not uncontroversial.[36]

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[33] See Bank for International Settlements, *61st Annual Report* (Basel, June 1991), p. 62.

[34] Economic Commission for Europe, *Economic Survey of Europe in 1991-1992* (United Nations publication, Sales No. E.92.II.E.1), p. 230.

[35] *Izvestia*, 6 March 1992, p. 4.

[36] A detailed analysis of the issue of property rights and privatization in transition economies was recently published in *Economic Survey of Europe...*, chap. 6; for a sober appraisal of the economic role of equity markets,

The markets nevertheless do figure in privatization plans. It is not that the average state firm could be privatized through a share issue floated on a domestic stock market; the markets are too thin for that and in the absence of large-scale institutional investors, such as pension funds in developed market economies, public assets would be immediately and visibly concentrated in a thin, rich stratum of the population. While sales of state enterprises to private groups and foreign direct investors are being arranged, proposals have also found favour--and have started to be implemented in Czechoslovakia--for virtually free mass distribution of shares in state enterprises to the adult population at large. Owning such shares is more attractive to the new shareholders if the shares have a measure of liquidity, i.e., if they can be sold for cash.

Indeed, the prospect of high capital gains has made the Czechoslovak programme very popular. More than half the population bought and validated voucher books for roughly the equivalent of one week's average salary. The books contain voucher points that are to be used to bid on shares in up to ten newly privatized companies. Individuals are permitted to place their own bids or to place their voucher points in a mutual fund that would bid in bigger blocks of points. About 600 Privatization Investment Funds were established in a relatively unregulated environment, and in a fierce competition for voucher books many have guaranteed returns of 10 to 20 times the initial investment and promised investors the right to sell their holdings for cash in a year's time. The first round of the mass privatization is scheduled to begin on 18 May 1992.

External financing and debt management

Over time, the emerging financial structure in the transition economies will facilitate the mobilization of domestic savings and their decentralized allocation to investment, especially as inflation is controlled and as prices come to better reflect relative scarcities in the economies, not least as regards foreign exchange (see box IV.1 on the rouble in the former Soviet Union). There is also every reason to expect the economies in transition to draw financial resources from the world's major capital markets, although for the time being they are almost all excluded from those markets.

The disruption of economic activities seems to be part and parcel of the transition to new market economies, as discussed in chapter II. The consequence has included external debt-servicing difficulties for some countries and a general downgrading of the countries of eastern Europe and the former Soviet Union as credit risks.

In comparison with the world as a whole, these countries had been considered above-average credits by the market in recent years, except for Poland and Romania (see table IV.5). This year, only Czechoslovakia and Hungary are still so rated, and each was able to raise funds on international capital markets ($0.3 billion and $1.4 billion, respectively, mainly in bond issues). Although the rating of Poland is still quite low, the market has been raising its evaluation in the light of Poland's adjustment programme and international support and it is possible that Poland might soon qualify in the eyes of the banks for, say, project-related financing.

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see Joseph E. Stiglitz, "Financial markets and development", *Oxford Review of Economic Policy*, vol. 5, No. 4 (winter 1989), pp. 55-68; and for the case that a more bank-centred rather than market-centred system is more appropriate for the transition economies, see Jenny Corbett and Colin Mayer, "Financial reform in eastern Europe: progress with the wrong model", *Oxford Review of Economic Policy*, vol. 7, No. 4 (winter 1992), pp. 57-75.

Box IV.1. How much is a rouble worth?

The national currencies of market economies are "worth" whatever the going rate for the currency is in the international market. Under central planning in the former Soviet Union, in contrast, the exchange rate could be arbitrary and it was. The State would plan to export an amount sufficient to earn the foreign exchange needed to purchase the planned import bill. The trade calculations were in foreign exchange and the production for export was figured in domestic currency just as it was for production for the domestic market, except that a bonus might be credited to the enterprise's accounts for the greater effort needed to meet export standards. No foreign money came across the exchanges into the domestic accounts.

The situation began to change with the commitment to make the transition to market economies and integrate them into the world economy. Beginning in 1989, some enterprises received permission to trade abroad for their own account, the proceeds to be held in foreign currency deposits at *Vneshekonombank*, the State foreign trade bank. These funds could be used to purchase foreign goods but there was no need or desire to convert them into local currency, especially if the transaction had been at the official rouble/dollar exchange rate (0.6 rouble per dollar), which bore no relationship to market realities.[a]

The right to trade and hold foreign currency deposits was expanded in 1990 and 1991 until practically all enterprises in the USSR were covered. The official rouble/dollar exchange rate now had to be supplanted by something providing a practical measure of the rouble's worth.

In November 1990, the Soviet authorities introduced a so-called "commercial exchange rate" of 1.7 roubles per dollar, which was three times the official rate. Henceforth, goods imported through central state channels for enterprises would be valued and paid for in roubles at this exchange rate and exporters could convert foreign currency balances at *Vneshekonombank* into roubles at this rate. Exporters had to sell 40 per cent of their convertible currency earnings to the Government at that rate to help it service the country's foreign debt. It was considered a bold step that acknowledged the overvaluation of the official rate and it was the first actual exchange rate for enterprises. However, the rate was still overvalued and did not provide any incentive for enterprises to convert more than the required amount of foreign exchange to domestic currency.

In April 1991, the Government pulled back further from exchange control by abolishing the special exchange rate which Soviet residents had been required to use to convert roubles into foreign exchange for travel abroad.[b] It also decreed that within the country's borders, convertible currency could be bought and sold by enterprises and individuals at State Bank currency exchanges. The exchange rates would be set at "auctions" to reflect changing supply and demand. Now the rouble exchange rate was supposed to become meaningful for domestic economic agents, as well as for foreign investors, who for the first time were promised a workable mechanism to convert their rouble earnings into hard currency for repatriation. However, the "commercial" rate would still be used by enterprises for the required sales of foreign exchange earnings and for billing for centrally provided imports.

The Soviet authorities gradually widened the circle of agents authorized to deal in foreign currency and permitted more banks and enterprises to buy and sell currency for roubles at the regular auctions. The initial auction exchange rate was fixed at the beginning of April 1991 at 27.6 roubles per dollar. But within weeks the rouble began to slide steeply, since the supply of hard currency being presented at the currency exchange was consistently much lower than demand.

In June, the Ministry of Finance introduced a retroactive confiscatory tax on rouble earnings from the sale of hard currency by enterprises, thus further diminishing their incentive to sell hard currency for roubles. The impact of these measures on the rouble rate at the auctions was dramatic.

In addition, exporters began to routinely spend foreign currency earnings to import food, medicine and consumer goods for their employees and for resale at rouble prices that far exceeded the official prices, at which little supply was forthcoming. Other enterprises then found it increasingly difficult to obtain hard currency for needed imports, as in food processing and pharmaceuticals. Meanwhile, the high rate of money creation to finance the burgeoning Government deficit (see chap. II) increased inflationary pressure and exacerbated the by now widespread "flight from the rouble", which permeated even retail trade and, especially, services. Thus, the demand for hard currency by both population and enterprises grew rapidly, while the supply remained very limited.

At the end of July, the USSR *Gosbank*, the State Bank, introduced a new "tourist" rate for purchase of foreign exchange by individuals of 32 roubles per dollar. Early in November, the tourist rate was raised to 47 roubles per dollar. These actions of the Soviet central bank, taken against the widespread perception that the rouble's "true" exchange rate was always much lower than the one declared officially, provided an additional, speculative impulse for a further devaluation of the rouble.

With the dissolution of the Soviet Union, the USSR *Gosbank* and the official, commercial and tourist exchange rates were abolished. The Central Bank of the Russian Federation then introduced two new exchange rates, a "market" rate and a "special commercial rate". The latter, set at 55 roubles per dollar, was to be used to exchange the 40 per cent of foreign currency earnings by enterprises, as before, on top of which, a further sale of 10 per cent of earnings was mandated at the market rate. The Central Bank fixed that rate at 110 roubles to the dollar in January 1992; it then appreciated to 90 roubles, but as of the beginning of April it was again 100 roubles per dollar.

The announcement of the Government of the Russian Federation that it would liberalize prices in January 1992 significantly increased inflationary expectations. The effect could be seen on the Moscow Interbank Currency Exchange. The exchange rate on this market reached 230 roubles per dollar in January, after the domestic price increases went into effect. It then appreciated to 140 roubles in late February, depreciated again to 160 roubles in mid-March, and during April it gradually strengthened to 150 roubles per dollar, in part backed by the intervention of the Central Bank. As these wild price gyrations show, the market is quite thin.

Many experts--both in Moscow and abroad--believe that these rates now undervalue the rouble.[c] Officials of the Government of the Russian Federation, in arguing for the creation of an international rouble stabilization fund, have talked of their plans to peg the rouble's rate somewhere close to 50 roubles per dollar. The Central Bank reportedly does not have sufficient hard-currency resources to sustain a massive intervention to defend such a rate on its own. The April commitment of the Group of Seven industrial countries to include a $6 billion stabilization fund as part of a package of financial assistance for the former Soviet republics would assist in holding the rate in the desired range, not because $6 billion would necessarily suffice to stem a speculative flight from the rouble, but because before it is established, a strict adjustment programme would be signed with IMF which would signal an international consensus, backed by financial commitments, on where the rouble rate should be.

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a. Official exchange rates existed to convert the value of hard currencies earned or expended by the foreign trading organizations into a common measure, the *valuta* rouble, but that was not the rouble used in domestic transactions. Some 2,000 coefficients were used to convert *valuta* roubles into domestic roubles in enterprise accounts. In addition, a different currency, the transferable rouble, was used for valuing trade among member countries of the former Council for Mutual Economic Assistance. In principle, a state trading authority could use a transferable rouble surplus with one member country to clear a deficit with another, but in practice, each set of bilateral balances was kept separate.

b. This rate and the small amounts of transactions carried out under it had been the only direct conversions of local into foreign currency. Hard-currency earnings of individuals could only be converted at the official rate, held in *valuta* rouble accounts for spending in special stores.

c. For example, it is said that in Moscow a given sum of hard currency would buy three to four times as much if converted into roubles at the market rate, than if spent at the state hard-currency shops (*Izvestia*, 14 February 1992). Moreover, imported inputs of raw materials, machinery and equipment, and so on, would cost a prohibitive amount in roubles at the market rate compared to equivalent domestic supplies when available.

Table IV.5. Credit ratings of eastern Europe and the former Soviet Union, 1988-1992[a]

(Percentage of global average)

	1988	1989	1990	1991	1992
Eastern Europe					
Albania	..	..	..	..	41
Bulgaria	123	120	111	73	56
Czechoslovakia	140	141	112	132	126
Hungary	120	115	112	108	111
Poland	46	47	49	57	68
Romania	86	84	85	73	68
Former USSR	168	168	159	117	79[b]
Memorandum item					
Global average rating	38.9	38.7	39.0	38.0	37.5

Source: UN/DESD, based on Institutional Investor.

[a] Ratings are the result of a survey of 75 to 100 banks, weighted according to their worldwide country exposure and country analysis systems; respondents rate countries from 0 to 100, with 100 being the least chance of default; data were from March surveys.

[b] Comparable ratings for the successor republics were: Armenia 39, Azerbaijan 40, Belarus 51, Estonia 69, Georgia 36, Kazakhstan 47, Kyrgyzstan 34, Latvia 64, Lithuania 63, Moldova 38, the Russian Federation 66, Tajikistan 34, Turkmenistan 34, Ukraine 60 and Uzbekistan 37.

The most spectacular decline ever recorded in the creditworthiness ratings was that of the former Soviet Union.[37] In 1989, the international banking community put the riskiness of lending to the USSR on a par with lending to Ireland, the Republic of Korea and New Zealand and below lending to Greece, Portugal or Saudi Arabia. Last year the markets closed to the USSR and are closed to each of the successor republics. Indeed, all of them were rated below the last, hypothetical rating of the defunct USSR (see table IV.5).

One major focus of uncertainty has been the servicing of the outstanding debt of the former Soviet Union. After the breakup of the Union, the Governments of the Russian Federation, Ukraine and most other successor states declared their intention to honour the debts incurred by the former Union. This would help assuage creditors, but there was considerable difficulty at first in establishing a mechanism and formula for sharing the obligations. One early idea was to divide up the debts and make them the responsibility of individual republics. This did not prove feasible, in part because there were more than 600 individual credit agreements with substantially differing terms and conditions, making it all but impossible to divide up.

It thus had to be handled collectively and in mid-March 1992 the 11 members in the Commonwealth of Independent States (CIS) agreed to assume "joint and several" responsibility for repaying the debt of the USSR; i.e., if one state defaulted, the others would take over the financial payments. This arrangement had originally been negotiated with the Governments of the Group of Seven in October and November 1991, but it was not joined at the time by Azerbaijan, Georgia, Ukraine, and Uzbekistan. Part of the problem seemed to be the mechanism for debt payments. They used to go through *Vneshekonombank*, the foreign trade bank of the USSR, but Ukraine preferred another agent, not as directly associated with the former Union and not under the Russian Federation's control. The compromise reached in March under pressure from the Western creditors was that a successor agency, also called *Vneshekonombank*, will continue to be the only medium for debt payments, but the Russian Federation and Ukraine will assume two of three positions as co-chairs of a standing inter-state council which will govern it, with the third seat going to other republics on a rotating basis.[38]

If a concrete arrangement was thus agreed under the machinery of the CIS, some uncertainty remains about its implementation, not least because many republics simply do not have the necessary hard-currency reserves, their export earnings are negligible and the mechanisms for enforcement of existing currency regulations and tax collection are in their infancy. Indeed, earlier this year the Russian Federation declared that it had assumed overall responsibility for the totality of the foreign debt of the former USSR, with the outstanding share of other republics to be treated as their debt to the Russian Federation.[39] The Russian Federation was also reported to be the only successor state to have made any payment on the foreign debt as of April 1992.

Even so, substantial obligations were rescheduled, while others are in abeyance.

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[37] See *Institutional Investor*, March 1992, pp. 122-123.

[38] Votes are to be distributed according to the republics' agreed shares in the total debt. The decisions of the council will only be valid if passed with no less than 80 per cent of the votes. Each republic's share of the debt was resolved relatively quickly. The Russian Federation accepted 61 per cent, Ukraine 16 per cent, Belarus 4 per cent, Kazakhstan 4 per cent, with the remaining States taking up the rest. The three Baltic republics declared that they did not consider themselves responsible for the debt incurred by the former Soviet Union.

[39] *Izvestia*, 20 January 1992.

Among the latter, for example, is the agreement the Soviet Union reached with Hungary to convert outstanding transferable rouble obligations to about $2 billion in convertible currency debt. As with the balances of about 5 billion roubles owed to Czechoslovakia, arrangements will need to be worked out under the new Government.

As part of the agreement with the Group of Seven in November noted above, $3.6 billion of principal falling due in 1992 on debts owed to Paris Club creditors was to be deferred. In early December, *Vneshekonombank* had to suspend principal payments on debt to commercial banks and the international bank advisory committee that coordinates debt rescheduling for the Soviet Union agreed to roll over principal payments falling due from December 1991 to March 1992, on the understanding that interest payments would be kept current. Official and commercial creditors were to receive equal treatment.[40]

In any event, the agreed debt servicing has not been kept current. Nor has the debt servicing owed to the former USSR. According to Soviet data, the Union's foreign debt at the end of 1991 was around $80 billion, excluding debt of individual Soviet enterprises incurred on their own, clearing and barter accounts, amounts owed to former socialist countries in hard currency and lend-lease debt. But the debt owed to the Soviet Union by developing countries and former socialist countries amounted to $158 billion, at the official exchange rate.[41] Most of this debt is believed not to be recoverable, though attempts to arrange at least partial payment in kind are under way with certain countries. One way in which this might work was illustrated by an arrangement with the Crimean Executive Committee. It bought a part of Syria's debt from the then Soviet government. The Committee then swapped the debt for various Syrian goods which were subsequently resold in the Crimea. Outright sales of such debt on the secondary market have also been proposed. They would undoubtedly be at deep discounts since the debt of most of the countries on which the USSR had claims is not actively traded.

The immediate need in the former USSR is to improve the international cash inflow. Unhappy with Government regulations that a substantial part of export revenues be exchanged for roubles (see box IV.1), exporters are said not to repatriate their earnings, but, in clear violation of existing currency regulations, to deposit them in overseas bank accounts, buy securities or make investments abroad. Substantial amounts of hard currency are also reported to be circulating within the borders of the CIS, which should not be surprising given the growing number of commercial banks officially licensed to deal in hard currency and the widespread "dollarization" of internal economic activity, down to retail level. But hard currency used as a domestic means of payment is not available to purchase necessary imports. The Russian Federation's Government thus declared its intention to tighten control of currency flows and enforce regulations.[42]

The damage from capital flight is direct, but it is perhaps even more significant as a sign of the adjustment task that still lies ahead, of the need to rebuild confidence in the currency and of the need to create an environment in which enterprise management will seek to produce for the short term and invest for the long term. It requires a firmly established legal structure, clearly defined rights in property and contract, agreed standards of accounting, and a stable tax and regulatory regime. Once established, the payoff will be not only in the development of domestic economic activities, but also in attracting the interest of foreign direct investors in long-term participation in a newly dynamic situation.

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[40] World Bank, *Financial flows to developing countries, Quarterly Review* (December 1991), p. 18.

[41] USSR Goskomstat, *Ob ekonomicheskom polozhenii strany v 1991 godu* (Moscow, December 1991), p. 25.

[42] See *Memorandum on the economic policy of the Government of the Russian Federation*, ITAR-TASS, 4 March 1992, pp. 3-4 and 13.

The experience of the eastern European countries, which have been in transition for a longer period, is that laying down these prerequisites of market economy development takes considerable time. And as far as the direct investment response is concerned, there seems to be first a rush to establish formal agreements and perhaps distribution facilities for foreign goods and services, followed only slowly by investment in local production facilities.[43]

Nevertheless, the financial inflow associated with direct investment can build up quickly, as Hungary's experience attests. It has been the most popular destination of direct investment flows to the transition economies, a consequence of being a relatively "creditworthy" country, being further along in the transition process--reforms having begun in 1968--compared with its neighbours and offering, at least in 1990, relatively attractive interest rates on hard-currency deposits at the central bank.[44] In 1991, the inflow of direct foreign investment almost tripled, rising to $1.5 billion, excluding contributions in kind.[45] Half of this amount was invested through the privatization process in the country, the other half through the establishment of new joint ventures.

Only a fraction of the accumulated capital import, however, has yet been spent on investment projects and imports and considerable sums have been kept in hard-currency deposits at the National Bank of Hungary.[46] While this has helped raise official foreign exchange reserves, it is not the purpose of direct investment.

Moreover, with the large net inflow of foreign exchange last year, to which direct investment contributed, the real value of the forint appreciated (i.e., the forint was devalued by less than the rate of inflation). Coupled with rising labour costs, this is limiting the attractiveness of Hungary as a location for joint ventures that produce for export. Some plants were temporarily closed and announced expenditure plans were deferred. In addition, despite the Government's import liberalization policy, joint ventures have pressed, thus far without result, for more protection against imports than the Government had already granted.[47]

Official finance for the transition

It is clear that if external finance is to contribute to the early stages of the transition to market economies, it has to be primarily through the activities of official entities. For this, the international donor and creditor community has a formula that it applies universally. Outside of humanitarian assistance, official flows for economic assistance are provided in the context of adjustment and development programmes agreed with IMF and the World Bank. As membership in these organizations is seen in any event as part of becoming reintegrated into the international market economy system, all transition economies that were not already active members have either become members of these organizations, reactivated dormant membership or applied to join. In particular, all 15 successor states of the former Soviet Union submitted applications for membership. Five transition economies in eastern Europe already maintain active stand-by or extended arrangements with the Fund.[48] Last year the Fund lent them $3.6 billion on a net basis; the largest previous outlays were on the order of $500 million in the early 1980s when Hungary and Romania had programmes with the Fund. World Bank disbursements were about $2 billion.

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[43] See *World Economic Survey, 1991...*, p. 81.

[44] Another incentive in Hungary, as in the other transition economies, has been the tax concessions contained in the "investment package". These were an important factor in the decisions to close down existing joint ventures and reopen as new ones that enjoyed the tax benefits. The result was an increase in the number of joint ventures but a decline in the average capital invested in them. In any event, the Government--as in Poland--will gradually stop granting tax concessions to foreign joint ventures.

[45] *Népszabadság* (Budapest), 2 March 1992, p. 17.

[46] *Figyelő* (Budapest), 12 March 1992, p. 13.

[47] For example, on the meeting of the Minister for International Economic Relations with business leaders of joint ventures, see *Magyar Hírlap* (Budapest), 29 January 1992, p. 11.

Overall official flows to the transition economies have been coordinated by the European Community, as per the agreement of the Group of Seven at its summit in July 1989. All eastern and central European countries were recipients under this arrangement in 1991, including Albania and Yugoslavia and from November, the three Baltic states. The main goals of the assistance have been to help the countries create democratic political institutions and market-based economies, and become better integrated into the world economy. Funds are provided through bilateral sources, which are mobilized in the Group of 24;[49] the EC itself, principally through the European Investment Bank, the European Coal and Steel Community and PHARE;[50] and international financial institutions, namely IMF, the World Bank Group and the new Bank for European Reconstruction and Development (EBRD).

The EBRD announced its first project on 25 June 1991, a loan of almost $50 million to eight medium-sized Polish cities for modernizing the domestic heating operations of their local authorities. Taking only 17 months from the beginning of the first negotiations on its creation to its first project commitment, the EBRD has shown how quickly the international community is able to mobilize itself for high priority programmes on which an effective consensus is reached. As a relatively small institution, capitalized at $12 billion, the Bank is to lend mainly to private sector activities and take equity stakes. Through mid-February 1992, the Bank committed almost ECU 450 million (less than $560 million) in 14 projects, ranging from a small equity stake (about $3 million) in a Hungarian computer system company, to a loan of almost $180 million for Romanian telecommunications and a loan of over $75 million for a joint venture in Hungary involving one of the world's largest automobile makers. These, of course, are financially small amounts, meant to fill a niche in the official flows provided by the bilateral creditors and the larger institutions.

Altogether, according to the European Community,[51] the industrialized countries have pledged $45 billion since 1989 to speed economic recovery in eastern Europe. Only about 20 per cent of this amount, however, has been disbursed. Eighty per cent of the pledged amount came from the EC and from the European Free Trade Association; $32 billion were supplied by the individual countries, the rest came from international institutions. One quarter, $8 billion, of the amount pledged by the countries in the Group of 24 was in grants, the rest in loans.[52]

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[48] That is, Bulgaria, Czechoslovakia, Hungary, Poland and Romania.

[49] The Group of 24 comprises the member States of the Group of Seven, the other members of the EC, and members of the European Free Trade Association, plus Australia, New Zealand and Turkey.

[50] Although its acronym indicates its limited origins (*Pologne/Hongrie: Assistance à la restructuration économique*), the programme has financed projects in Bulgaria, Czechoslovakia, Romania and region-wide, as well as in Hungary and Poland.

[51] Commission of the European Communities, *G-24 Assistance to Central and Eastern Europe, Summary Tables*, Brussels, 11 November 1991.

The ECE estimated that $8.6 billion were disbursed from official sources to eastern Europe in 1991, about four times the 1990 level. It did not expect the same level to be maintained this year, nor did it expect private finance to make up the difference.[53] This does not, however, include flows to the former Soviet Union. Various estimates have been made of the financial assistance needs of the successor republics. In early April 1992 a multilateral financial assistance package for the Russian Federation was announced by the Group of Seven. The package consists of three major elements: (a) roughly $18 billion in financial support in 1992 to help the Russian Federation stabilize and restructure its economy ($2.5 billion in deferred debt payments, $3 billion in IMF loans and $1.5 billion in loans from the World Bank, EBRD, etc., and up to $11 billion in bilateral assistance, including export credit guarantees, food credits, humanitarian aid); (b) a $6 billion currency stabilization fund to help support the rouble exchange rate (see box IV.1); and (c) early membership in IMF. In addition to this, according to IMF estimates, the other 14 republics of the former USSR would need $20 billion in 1992.[54]

At the Washington conference on assistance to the CIS states in January, the EC reported that almost $79 billion had been committed to them from September 1990 to January 1992, of which about three quarters was from the EC. Much of this has yet to be disbursed, and how large the net additional commitments need to be for the region remains unclear at this point.

Should industrial countries promote saving?

The developed market economies have been called upon to financially assist and invest in the transition economies, while also strengthening their transfers to developing countries and meeting their own investment needs. Putting aside questions of political and economic desirability, is such an effort even feasible? There was a decline in saving in many high-income industrialized countries in the 1980s, and there has been talk of a global saving shortage in the 1990s.[55] Yet the experience of the 1980s was complex and some of the factors that made for a low saving rate have changed. As the scenario that concludes this chapter will seek to show, the amount of saving in these countries, and in transition and developing countries as well, can be raised significantly higher with a more appropriate policy focus.

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[52] For details on commitments and disbursements, see *Economic Survey of Europe...*, pp. 182-187.

[53] *Economic Survey of Europe...*, p. 186.

[54] Address of the Managing Director, *IMF Survey*, 27 April 1991, p. 133.

[55] See, for example, "Saving in the industrial countries and the world demand for capital", Bank for International Settlements, *61st Annual Report* (Basel, June 1991), pp. 32-39; Robert Solomon, "Do we face a global shortage of capital?", *Policy Focus* 1991, No. 6, Overseas Development Council (Washington, D.C., October 1991); and Address of the Managing Director of IMF, World Affairs Council, San Diego, 5 March 1992 (see *IMF Survey*, 16 March 1992). But see also, "The concept of savings shortage and the role of finance", *Trade and Development Report, 1991* (United Nations publication, Sales No. E.91.II.D.15), pp. 87-99 and David F. Lomax, "Saving in the world economy", *National Westminster Bank International Review*, 19 October 1990.

The saving record

Typically, the discussions of a global saving shortage draw on studies that measure saving in nominal terms and relate it to GDP or another *numéraire* also measured in nominal terms.[56] By such measures, the saving rate in each of the seven major industrial countries, in particular, was lower on average in the 1980s than in the 1970s (see table IV.6). However, if consumption and income are measured in fixed prices, the saving rate in Canada, Germany and Japan rose in the 1980s. Also, as the table shows, the saving rate in the 1980s in fixed prices--in this case, the prices of 1980--was higher than in nominal terms in all of the countries.

The importance of price changes in the measurement of saving follows from the economic concept of saving as current expenditures foregone. If, say, in one year imported goods fell in price relative to the prices of exported production, then the same volume of goods and services could be purchased as the year before using less income. If that amount were in fact purchased, measured saving would be higher although "real saving" in the sense of consumption foregone would be no different. And similarly, if the price of investment goods fell relative to those of consumption goods, more investment could be undertaken in real terms with a given level of income not consumed.

Figure IV.5, indicates how significant the relative price effects have been in the developed market economies. From the 1950s to the early 1970s, the terms of trade improved and real saving was less than nominal saving. The trends in both measures, however, were fairly close. Since then, with the terms of trade becoming more volatile, movements of the two indicators differed more. In 1986, for example, saving in nominal terms rose half a percentage point as a share of GDP, but the saving share fell by three quarters of a percentage point when corrected for the 6 per cent improvement in the terms of trade that year.[57] The overall trend of the saving rate for these economies since the mid-1970s is also quite different measured in real terms compared to nominal terms: in real terms, saving has been a rising share of GDP.

But if saving in real terms has been rising for the developed market economies as a whole, table IV.6 showed that this was not the case for all countries individually. Three patterns that seem to have characterized the post-war era are illustrated in figure IV.6. First, the United States has had a declining--if volatile--real saving trend over the entire period. Second, the high-income countries of western Europe[58] had a rising saving share until a dip following the oil-price increase and recession in the mid-1970s and a stable share thereafter that averaged over 22 per cent of GDP. Third, the saving share of Japan has risen almost steadily.

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[56] See, for example, Bijan Aghevli and others, *The Role of National Saving in the World Economy: Recent Trends and Prospects*, IMF Occasional Paper No. 67 (March 1990); and Jorgen Elmeskov and others, *Savings Trends and Measurement Issues*, OECD Economics and Statistics Department Working Paper No. 105 (1991).

[57] It may be recalled that two major developments in international prices occurred in 1986, namely a large drop in petroleum prices and a large fall in the exchange rate of the dollar against other major economy currencies (see statistical annex for details).

[58] That is, excluding Greece, Ireland, Portugal and Spain.

Table IV.6. Average saving rates in the seven major developed market economies, 1951-1990

(Percentage of GDP[a])

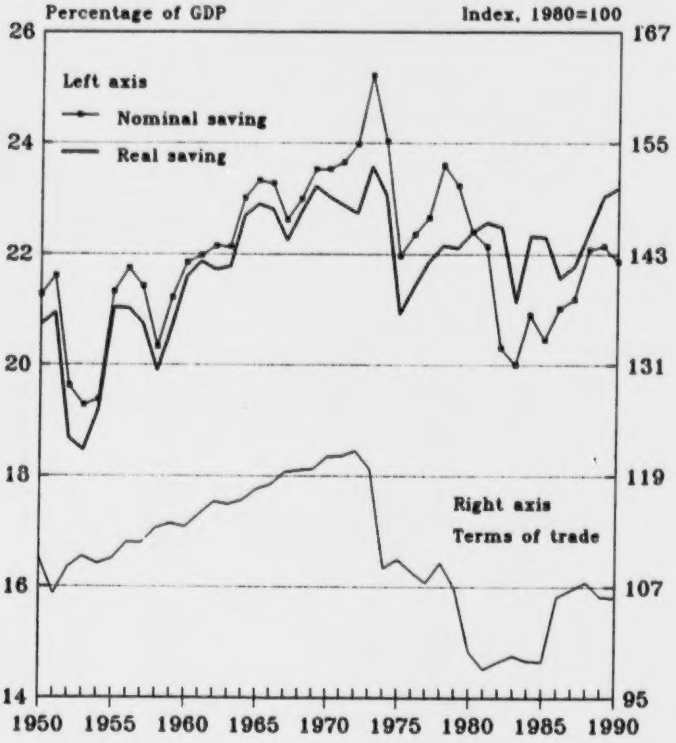
		1951-1960	1961-1970	1971-1980	1981-1990
Canada					
	Nominal	23.1	23.8	24.7	22.6
	Real	24.6	25.4	24.1	26.4
France					
	Nominal	21.9	26.1	25.6	20.5
	Real	17.9	22.5	23.6	20.8
Germany[b]					
	Nominal	26.5	28.3	25.2	24.3
	Real	26.7	26.6	23.6	24.3
Italy					
	Nominal	20.4	23.0	22.2	21.8
	Real	24.5	29.0	24.8	22.5
Japan					
	Nominal	27.7	36.3	34.5	32.3
	Real	15.2	24.6	29.4	34.4
United Kingdom					
	Nominal	15.1	18.7	19.2	17.1
	Real	16.6	20.4	21.6	18.3
United States					
	Nominal	19.9	19.6	19.2	15.7
	Real	19.5	19.3	18.1	17.0

Source: UN/DESD.

[a] Percentage of GDP in real terms based on components of real GDP as reported to the United Nations by national authorities, rebased to 1980=100.

[b] Western Germany only.

Figure IV.5. Real and nominal saving in the developed market economies, 1950-1990

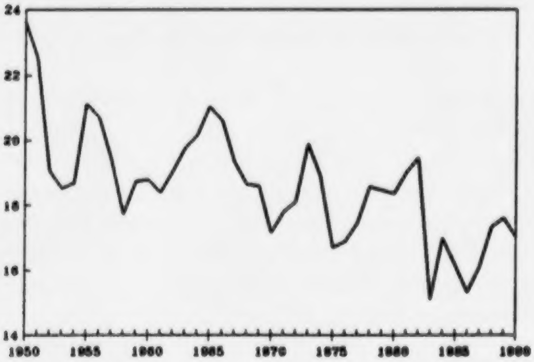


Source: UN/DESD.

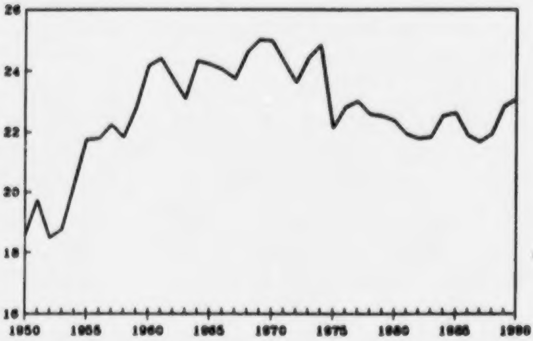
Figure IV.6. Real saving in high-income developed market economies, 1950-1990

(Percentage of GDP in 1980 prices and exchange rates)

United States

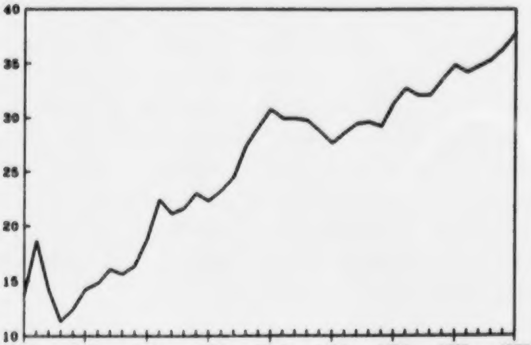


High-income Europe*



*** Western Europe, excluding Greece, Ireland, Portugal and Spain.**

Japan



***Source*: UN/DESD.**

Fear about a world saving shortage in the 1990s would thus entail concern that the long-run trend of a falling real saving share in the United States would not be reversed, while the rising trend in Japan could not be sustained. Indeed, the Japanese saving rate is so high that further increases are unlikely there, especially in view of the ageing of the population and evolving social mores concerning leisure and work.

On the other hand, figure IV.6 also shows that the rising saving trend in the second half of the 1980s was a widespread phenomonen. Real saving rose in almost every year as a share of GDP in each section of the figure. To investigate the meaning of these shorter-run developments, it is necessary to decompose gross saving in the period into its major components.

First, one may separate saving that in essence serves to replace capital that is being worn out in the process of production. Known as the capital consumption allowance (CCA) in national income accounting, it is analogous to depreciation in business accounts. In principle, CCA is part of the saving of all users of capital, whether it is the government, business enterprises or individual households. In practice, national accounts statisticians are not always able to make separate estimates of the CCA for different economic groupings (in particular, the dividing line between enterprises and households is not always easy to discern). For international comparisons, the CCA is thus often reported for the economy as a whole, rather than by saving sector. This is the approach taken in table IV.7, showing saving in the seven major industrial economies. The CCA is seen there to be a very substantial share of saving in each economy, generally exceeding half the total. It is also the most stable part of saving. Thus, even though there was a small negative trend in the CCA in the second half of the 1980s in five of the seven countries (see table IV.8 below), the trend appears to be quite small when set against the size of the CCA in each country.

The remainder of saving, "net saving", is the part that increases the size of the capital stock, whether it is invested at home or abroad. Most of that capital stock is owned in the first instance by enterprises, the saving of which comprises profits that are reinvested in the firm, rather than paid out in taxes or distributed to enterprise owners, as in the form of dividends. Management makes choices about whether to retain earnings--and thereby build up existing stockholders' equity in the firm--or distribute additional dividends. Retaining profits, everything else equal, raises stock prices and when dividend income is taxed more heavily than capital gains on sales of equity shares, stockholders tend to favour higher enterprise saving. Management tends to favour retaining earnings because by raising share prices it makes raising funds through new share issues easier. Moreover, firms with poorer access to credit and higher investment rates tend to retain more profits and pay smaller dividends.

The operation of these factors at the aggregate level can be seen in the three countries that had a significant trend in enterprise saving in the second half of the 1980s, namely Germany, the United Kingdom and the United States (see table IV.8). Firms in Germany raised their saving rate by almost 1 percentage point of GDP a year, from less than half a per cent of GDP in 1985 to 3.5 per cent in 1988 and 1989. During the same period, inflation virtually ceased in Germany, while long-term interest rates were barely lower than they had been in the early 1980s (see tables A.7 and A.8). Real interest rates were thus quite high and so when increasing rates of economic growth raised corporate profits and the demand for additional net investment, there was a strong incentive to retain those profits as enterprise saving.

Table IV.7. Composition of gross saving in seven major economies, 1985-1989

(Percentage of GDP)

	Capital consumption allowance	Net saving			Total gross saving	Total gross saving in 1980 prices
		General government	Enterprise sector[a]	Households		
Canada	11.6	-2.8	3.9	6.7	19.4	23.5
France	12.5	-0.5	2.9	5.3	20.3	20.0
Germany[b]	12.5	1.7	2.5	7.8	24.4	23.7
Italy	12.0	-6.6	3.5	11.9	20.8	21.3
Japan	14.0	5.8	2.8	10.2	33.0	35.3
United Kingdom	11.4	0.4	2.8	1.5	16.1	17.7
United States	12.5	-3.5	1.9	4.4	15.3	16.6

Source: UN/DESD, based on OECD, National Accounts, Detailed Tables (Paris, 1991).

[a] Including corporate and quasi-corporate enterprises in the private and public sectors.
[b] Western Germany only.

Table IV.8. Trends in components of saving in seven major industrial economies during 1985-1989[a]

(Average annual change in percentage of GDP)

	Capital consumption allowance	Net saving		
		General government	Enterprises	Households
Canada	-0.2	0.8	--	--
France	--	0.4	--	--
Germany[b]	-0.1	--	0.8	--
Italy	-0.2	0.3	--	--
Japan	0.2	1.0	--	-0.4
United Kingdom	-0.2	1.0	-0.5	-0.7
United States	-0.1	0.4	-0.3	--

Source: UN/DESD, based on OECD, National Accounts, Detailed Tables (Paris, 1991).

[a] Trends are defined as regression coefficients on time that are significant at the 10 per cent level.

[b] Western Germany only.

The United Kingdom and the United States provided examples of contrary developments. In the United Kingdom, economic growth was relatively strong and the investment share of GDP rose. But enterprise saving fell significantly as a share of GDP. Real long-term interest rates had been relatively high in the mid-1980s, but then growth of the real money supply began to surge in 1986 and real interest rates fell up to 1989, while new forms of credit and deregulation of financial markets made financing more attractive. Indeed, financial market conditions attracted a large net transfer of resources from abroad to British financial markets beginning in 1988 (see table A.27). As a result, British firms rapidly built up their debt obligations, and when credit tightened and recession followed, so did numerous bankruptcies.[59] This is likely to limit the practice in the 1990s.

In the United States, several factors help to explain the significant decline in enterprise saving, from over 3.5 per cent of GDP in 1985 to about 1 per cent in 1989. First, corporate profits (surplus on operations) slackened as a share of nominal GDP in the latter 1980s. Second, real long-term interest rates declined. The rising stock market, despite the 1987 crash, provided an additional incentive to finance investment with outside funds. These factors might be sufficient explanation, but financial market developments provided an additional impetus.

There was a wave of mergers and hostile takeovers of large corporations, especially but not exclusively in the United States, virtually all of which were financed with corporate debt that stripped away funds that might otherwise have been used as enterprise saving. Typically, firms with low debt levels and steady cash flow were the ones most vulnerable to takeover. An aggressive group of investors would borrow heavily on the expectation that the loans would be serviced out of the target company's cash flow. This allowed them to buy a controlling part of the firm's outstanding equity shares at high prices. The speculative nature of these endeavours was well captured in the industry rating of such financing as "junk bonds".[60] The subsequent bankruptcy of many firms that would otherwise have weathered the current recession was one result.

Management is thus likely to follow more conservative approaches to enterprise finance in the 1990s in the United States as in the United Kingdom and this will help raise enterprise saving when recovery from recession gathers steam. In any event, although enterprises undertake the bulk of investment in the developed market economies, they supply only one of three basic parts of net saving. Among the seven major economies, net enterprise saving only ranges between 2 per cent and 4 per cent of GDP (see again table IV.7).

If aggregate saving is to rise appreciably in the 1990s, net savings by households is often considered a likely candidate to bring it about. Considerable research has been undertaken over the years with respect to household saving, as in the United States, where it became a focus of policy in the early 1980s.[61] Household saving nevertheless continued to decline in the United States, as in other countries, most especially the United Kingdom.

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[59] See "Industrial and commercial companies' gearing", *Bank of England Quarterly Bulletin*, vol. 31, No. 2 (May 1991), pp. 228-231.

[60] For a review of the process and its financial impact, see "Recent developments in corporate finance", *Federal Reserve Bulletin*, vol. 76, No. 8 (August 1990), pp. 593-603.

[61] In particular, the 1981 Federal income tax reform sought, *inter alia*, to raise investment and personal saving by reducing the rate of taxation of non-wage income and introducing a set of direct saving incentives (see Michael J. Boskin, "Tax policy and economic growth: lessons from the 1980s", *Journal of Economic Perspectives*, vol. 2, No. 4 (fall 1988), pp. 71-97).

In both those countries, the decline in household saving rates appears to have ended. In the United Kingdom, net household saving dropped to nil at the low point, following deregulation of financial markets and a boom in new forms of consumer credit, but that was in 1988 and saving rebounded thereafter. In the United States, the low point was in 1987 but the subsequent increase in the saving share has not been large.[62] Many hypotheses have been suggested to explain the fall in saving ratios, including demographic factors, the growth of public and private pensions and insurance, tax policy, and errors in measuring saving itself, but the most compelling factors in these countries and other major industrial economies seem to involve the optimism and net wealth of households.[63]

Whether households save for retirement, as a precaution against unforeseeable (and uninsured) expenses, or to leave an inheritance, they would see less of a need to save if the real value of their net wealth, their assets minus their debts, grew appreciably, which is what they did in most of the 1980s. Financial innovations in the 1980s also made new forms of credit--particularly home-equity loans and credit cards--readily available to the bulk of households, which made it less necessary to save before making large purchases. Moreover, the ability to borrow against the equity in home ownership increased the effective liquidity of housing assets and made it less necessary to build up other financial assets for precautionary motives. Coupled with a widely shared, confident outlook for overall economic growth and stability, creditors aggressively marketed loans and household debt levels rose rapidly.

The "go-go" 1980s appear to have been replaced by more sober household attitudes to debt and saving in the 1990s. Many creditors, especially in the United States, entered into bankruptcy, following the inability of borrowers--both corporations and households--to service their debts. The growth of the prices of houses and many financial assets slowed and prices even fell. In addition, under the recent recessionary conditions, households have become more cautious consumers, as noted in chapter II. The rise in unemployment and the fear that the duration of any spell of unemployment could be long and painful appear to make for prudence. Merchandising specialists notice a trend that could last well beyond the recession, namely that consumers are not only spending less, but they are also spending in more deliberate ways, looking less for panache and more for durability.

The implication of the new consumer psychology, as well as the slower growth expected over the medium term in the prices of housing and financial assets, is of a moderately stronger household saving in the 1990s than the 1980s. But this also means less of an impetus to economic growth from consumer spending, which was one of the reasons the forecast presented in chapter I for the developed market economies anticipated an unusually slow recovery period.

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[62] In terms of national definitions, personal saving fell to a low of 5 per cent of personal disposable income in 1988 in the United Kingdom (as opposed to zero as measured by the Organisation for Economic Co-operation and Development for net household saving), but it was above 10 per cent by the first half of 1990. In the United States, measured personal saving was 4.3 per cent of disposable personal income at the low point in 1987, but exceeded 5 per cent in 1990 and 1991.

[63] On personal saving in the seven major economies, see *World Economic Survey, 1990* (United Nations publication, Sales No. E.90.II.C.1), pp. 174-177. For more detail on the British and United States cases, respectively, see K. Alec Chrystal, "The fall and rise of saving", *National Westminster Bank Quarterly Review*, February 1992, pp. 24-40, and A. Lans Bovenberg and Owen Evans, "National and personal saving in the United States", *IMF Staff Papers*, vol. 37, No. 3 (September 1990), pp. 636-669.

It is also possible that slower economic growth in the 1990s may itself serve to reduce personal saving rates. This would be the case if, say, households had target ratios of personal wealth to income, so they would increase their saving share over the long run if they expected income increases to be long-lasting and would reduce saving as a share of income if what was thought to be a permanent fall in income occurred. There are various reasons such an "accelerator" relationship might obtain and it was judged recently by one research team as a relatively attractive explanation of the fall in personal saving rates from the 1970s to the 1980s in the United States.[64] If so, the prospects for personal saving and its role in raising or holding back the growth of aggregate saving are unclear.

Budget policy as saving policy

If the prospects for household saving in the 1990s are thus somewhat murky, there seems to be at least a broad consensus among researchers that direct government efforts to stimulate personal saving have very little impact. An engineered increase in economic growth, particularly one that is investment-led, is likely to raise personal saving, but saving-promotion policies--such as special tax advantages for contributions to saving accounts from which withdrawals cannot be made until retirement--do not seem to raise the level of saving. What they do is affect the forms in which people save.[65] Policy makers would thus need to look elsewhere if their goal were to directly raise gross domestic saving and the prime place to look is their own government operations.

Indeed, the increase in aggregate saving in the latter 1980s in the industrial countries that was noted above was mainly the result of an increase in saving by governments, or in the case where government saving was negative, by a reduction in "dissaving". In six of the seven major industrial countries, general government saving had significant positive time trends and in Canada, Japan and the United Kingdom the increase averaged as much as 1 per cent of GDP a year (see table IV.8).

The improvement in government saving, however, was not recycled into higher government investment. In the case of Japan, as discussed in chapter II, a high rate of government capital formation was in any event maintained. But net government investment as a share of GDP fell in Canada and the United Kingdom, in the latter case to well under half the average in the 1970s (see table IV.9).

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[64] That is, the authors rejected various other explanations of the fall in personal saving based on survey data on United States households and supplemented by similar data on Canada and Japan (see Barry Bosworth, Gary Burtless and John Sabelhaus, "The decline in saving: evidence from household surveys", *Brookings Papers on Economic Activity*, 1991:1, pp. 183-256).

[65] See Roger S. Smith, "Factors affecting saving, policy tools and tax reform", *IMF Staff Papers*, vol. 37, No. 1 (March 1990), pp. 1-70; and Barry Bosworth and Gary Burtless, "Effects of tax reform on labour supply, investment, and saving", *Journal of Economic Perspectives*, vol. 6, No. 1 (winter 1992), pp. 3-25.

Table IV.9. General government net investment in seven major economies, 1970-1989

(Percentage of GDP; period average or annual)

	Canada	France	Germany[a]	Italy	Japan	United Kingdom	United States
1970-1974	3.7	3.6	4.0	3.1	5.2	4.8	2.3
1975-1979	3.1	3.3	3.3	3.3	5.7	3.5	1.8
1980-1984	2.7	3.2	2.8	3.6	5.7	2.0	1.6
1985	2.7	3.2	2.2	3.7	4.7	2.0	1.6
1986	2.5	3.2	2.3	3.5	4.8	1.8	1.6
1987	2.4	3.0	2.3	3.5	5.0	1.6	1.6
1988	2.3	3.1	2.2	3.5	5.1	1.3	1.6
1989	2.4	3.3	2.3	3.5	5.0	1.7	1.7

Source: UN/DESD, based on OECD, National Accounts, Detailed Tables (Paris, 1991).

[a] Western Germany only.

The disassociation of government saving and investment trends seems to have been rooted in the motive under which the saving improved, which was to reduce the public-sector borrowing requirement. Government deficits had widened significantly in the late 1970s, as expenditure commitments grew, while tax revenues did not increase to the degree expected because average rates of growth of incomes slowed. Some of the additional spending was under entitlement programmes and transfers such as social security that, once legislated, were only partly under government control. Other expenditure increases were responses to cold-war fears about inadequate military preparedness and the desire to be able to better address regional concerns militarily. Finally, political pressures to reduce tax rates became irresistible, abetted in the United States by the adoption by the Administration that took office in 1981 of untried notions about the relationship between taxation and economic growth.

By mid-decade there was agreement on all fronts that government deficits in several industrial countries were unsustainable and that, in particular, the huge deficits and high real interest rates in the United States were seriously distorting the world allocation of investible resources.[66] The United States and other countries instituted new efforts to consolidate their government accounts and it is mainly the results of those efforts that were seen in table IV.8.

However, a reduction in the public-sector borrowing requirement is not the same thing as an increase in government saving. Government saving is the difference between current government revenues and current expenditures. Non-current expenditures are the government's investment. If a government reduces its borrowing needs by cutting back investment, there is no change in its saving. This happened to a degree in Canada, the United Kingdom and the United States in the second half of the 1980s when their public-sector borrowing requirement fell as a share of GDP by more than the rise in government saving because there was a fall in the GDP share of government investment.

The issue is not merely one of definition. A focus on reducing the public-sector borrowing requirement reflects a concern about the impact on financial markets of government borrowing. Yet, as long as the central bank does not accommodate the government borrowing by monetizing the deficit (i.e., buying government bonds with additions to the money supply), there are no general inflationary consequences and no policy worries on that score. Instead, policy makers are at least implicitly making the judgement that the additional private sector borrowing that the government might "crowd out" is preferable to what the government would have done with the funds. That might be the case, but not all private uses of borrowed funds are *ipso facto* superior to public uses.

In contrast, if government saving is taken as the policy target for budget consolidation, policy makers perforce will focus on issues of government and private investment.[67] For example, a government that sustains a deficit in its current budget would be identified as dissaving and thereby absorbing saving from the rest of the economy for uses that do not add to that nation's productive capacity. If a presumption can thus be made that government saving outside of emergency situations should not be negative, the public-sector borrowing requirement itself might well be positive. That is, government borrowing, which requires interest and principal payments over time, can be justified as a means to finance public investments that yield streams of benefits over time. Individual investment proposals still need to be evaluated, but there is no presumption that the "optimal" public-sector borrowing requirement is zero.

Moreover, a focus on government saving helps to properly assess privatization proposals. If government assets such as public enterprises are privatized, the proceeds do not form part of current revenues and thus have no immediate effect on government saving, although they may reduce the government's borrowing requirement, if only for the year in which the sale is made. However, if the enterprise had been earning a profit, its sale would reduce government saving in future years.

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[66] It was not expected that the amount of world saving would grow *pari passu* with a correction of United States Government dissaving. Saving in the world's major economies is co-determined. In other words, if a budget correction raised the overall United States saving rate, the net absorption of resources from abroad and the United States trade deficit would fall. To the extent that, say, the reduction in Japan's net transfer to the United States was not replaced with transfers elsewhere, Japan's trade surplus would contract. If domestic investment did not rise to absorb the freed resources, income and thus saving in Japan would drop.

[67] The argument is not that the current-capital dichotomy is the only correct way to measure government performance, as different budget measures are useful for different aspects of economic analysis and all measures have their operational limitations (a variety of budget measures are reviewed in Mario Blejer and Adrienne Cheasty, "The measurement of fiscal deficit: analytical and methodological issues", *Journal of Economic Literature*, vol. XXIX, No. 4 (December 1991), pp. 1644-1678).

The difficulty is most clearly seen in the budgeting by the United States Federal Government, which makes no distinction between current and capital expenditures. As the United States Council of Economic Advisors noted,

> "Because the Federal budget treats all borrowing the same, it imposes a bias in favour of current-account spending relative to spending for long-term infrastructure and productivity-enhancing programmes...Separating the Federal budget into a current and capital account could dramatically alter the way the public views fiscal policy, as well as the way the public views particular components of government spending...."[68]

In sum, industrial country governments raised their saving rate in the late 1980s as a consequence of their efforts to reduce overall deficits and this contributed importantly to the increase in aggregate saving and a desirable redirection of resources towards investment. But investment by the public sector itself seems to have been inopportunely cut back in the process because when the criterion is consolidating the overall deficit, postponing public investment helps meet that criterion just as well as increasing tax revenues or reducing military expenditures.

Save more by investing more

The 1991 recession postponed fiscal consolidation in the major economies, but the priority that Governments attach to reducing deficits remains intact. Government intentions to radically reduce fiscal deficits as soon as conditions permit were included as part of the policy assumptions in the baseline forecast of Project LINK that was presented in chapter I. According to that forecast, the growth rates of GDP in the major economies and in the world would be quite modest. The full LINK "baseline" forecast, which extends to 1996, entails an average growth of the developed market economies of 3 per cent a year during 1993-1996. For a period of recovery from economic recession, that is quite low. Unemployment would still be about 7 per cent in these countries at the end of the period and about 10 per cent in western Europe.

The baseline does, however, entail a recovery by 1995 of the world investment share to the level of the late 1980s in real terms, i.e., 25 per cent of world output in 1980 prices and exchange rates (compare figure IV.1). Inflation is held in check in the industrial countries and the budget deficits come down sharply. In the United States, the Federal deficit (unified basis) is forecast to fall from $330 billion in 1992 to $185 billion in 1996, from 5.6 per cent of gross national product to 2.4 per cent. In Germany, the budget deficit falls from DM 114 billion to DM 31 billion over the same period, from 4.2 per cent of the GNP of the former Federal Republic to 0.9 per cent. In Japan as well, the general account deficit of the Government declines from 1.5 per cent of GNP to 0.5 per cent.

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[68] United States Government, *Economic Report of the President*, transmitted to the Congress, February 1992, p. 270.

These results are the fruits of the strategy that focuses on reducing the public sector borrowing requirement. Yet with a different focus, following from the preceding analysis, it is possible for the economic outturn in these countries to be better domestically and better for the world economy. To demonstrate the point, a scenario was run using the LINK model to trace the global consequences of a different set of policy assumptions.

To keep the exercise tractable, it was assumed that the policies of only the three major industrial economies would change, namely Germany, Japan and the United States. They were each assumed to make roughly half the cuts in their budget deficits as were contained in the baseline.[69] In the United States, the extra government resources were assumed to be split equally between additional government investment and additional official flows to developing and transition economies. On top of this, the United States was assumed to restore a 10 per cent investment tax credit in order to help boost private investment, which was slated to grow relatively slowly under the baseline, considering that it was during a period of recovery from recession. Germany and Japan were assumed to fully use their extra resources to increase official international flows. Monetary policy was assumed not to change in any of the countries.

The additional international transfers were allocated to a group of lower and middle income developing countries that are traditional aid recipients and have a rather restricted access to international capital markets, and to five eastern European countries and the former Soviet Union.[70] The transfers were distributed among the recipient countries according to their import shares. The recipient countries were assumed to use all the additional external financing to increase investment and, consequently, their imports of investment goods.

The results of the scenario are quite favourable, first of all, for the recipient countries. In the target developing countries, the inflow of funds considerably relaxes the import constraint to growth. The average annual growth rate of output in 1993-1996 is 0.7 percentage points higher; the average annual growth rate of real investment is almost 4 per cent higher. By 1996 the investment share of GDP is almost 3 percentage points higher than it is under the baseline.

In the countries of eastern Europe, the results are even more dramatic. The average growth rate of GDP from 1993 to 1996 rises 1.2 percentage points, while that of investment is raised 8.5 per cent. Instead of a very lacklustre growth of investment under the baseline of 1.6 per cent a year, investment would grow 10 per cent annually and reach 30 per cent of GDP by 1996.

The reason the result is so strong is that the countries are expected to have passed the most difficult years of adjustment and be primed for the surge in investment which the scenario would see financed. In the former Soviet Union, in contrast, output is expected to be lower in 1996 than in 1992 even under the scenario. Investment would grow, however, under the scenario by 1 per cent a year instead of falling at a 0.7 per cent annual average rate.

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[69] More precisely, fixed amounts were added to the government expenditures contained in the baseline. In the United States, it had been assumed in the baseline that military spending would be reduced by $18 billion in 1993 and by additional amounts in subsequent years. Instead, the military savings were assumed reallocated to non-defence uses during 1993-1996. In Japan, government expenditures were increased by $10 billion in 1993, rising to $30 billion in 1996, and in Germany the additions were $5 billion in 1993 rising to $15 billion in 1996.

[70] Recipients were determined in part by the structure of the LINK system; e.g., Albania was excluded as a recipient because there is no Albania model. The developing-country sample excludes the capital-surplus oil-exporting countries, the first and second generation Asian exporters of manufactures (see chap. II), China, OPEC members and the large middle-income countries of Latin America.

The scenario also produced quite positive results for the three industrial countries. The baseline forecast had entailed such a large degree of economic slack that the extra spending and GDP growth under the scenario have virtually no inflationary impact.

In the United States, investment and GDP rise appreciably. Investment rises from 18 per cent of GDP in 1992 to 23.3 per cent in 1996, which is slightly above the 1996 level in Germany (22.4 per cent), although still far below that in Japan (almost 40 per cent), all measured using United Nations definitions in 1980 prices and exchange rates. In this regard, the scenario is a considerable improvement over the baseline, under which the United States investment share rises only to 20.6 per cent of GDP.[71] The tax credit adds to the initial increase in the budget deficit that arose from the scenario's change in government expenditures, but by 1996 the deficit in nominal terms is less than the 1993 deficit in the baseline. Moreover, since output grows more rapidly under the scenario, the ratio of the deficit to GDP in 1996 is lower than the baseline ratio in 1994 (see table IV.10).

As monetary policy was unchanged, the additional economic growth in the United States raises the demand for credit and thus interest rates, which are 0.5 percentage points higher than the baseline in real terms by 1996. This is not a large increase and only tempers the stimulus to investment from the investment tax credit. Moreover, the United States trade deficit deteriorates, as demand for imported capital goods rises more than foreign demand for United States exports. But the additional deficit is easily financed, with assistance from the higher international interest-rate differential and no additional decline in the exchange rate of the dollar is assumed beyond that in the baseline.

In Japan, the extra aid effort slows budget consolidation. Japanese exports receive a boost and greater net foreign private transfers result, in particular, it seems, to the United States. In the case of Germany, increased transfers have a major feedback effect on export demand, which raises incomes so much that the induced rise in tax revenues closes the budget deficit even faster than in the baseline case from 1994 on. Indeed, the growth of the sluggish German economy is given a lift and a major dent is made in the unemployment rate. Moreover, real saving grows more rapidly under the scenario than it does in the baseline in all three economies.

At the global level, the result of the exercise would be to make world investment in 1996 over $200 billion above what it would have been under the baseline (see figure IV.7). This necessarily means that world saving would likewise have been raised by over $200 billion. The extra saving came out of higher income, which was gained without jeopardizing macroeconomic stability in the major industrial countries. And with the higher level of investment, it can be assumed that in the years after the scenario period, the productivity and capacity enhancements of the investments take effect and additional benefits would be forthcoming in the developed, developing and transition countries.

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[71] The model's result, while quite strong, is not outside the historical experience of the United States. The tax credit makes some marginal investments profitable and also accelerates the investment expected in a period of recovery from recession.

Table IV.10. Results of a scenario in Germany, Japan and the United States, 1992-1996

		Germany[a]		Japan		United States	
		Baseline	Scenario	Baseline	Scenario	Baseline	Scenario
Central government deficit							
Current prices[b]							
	1992	114.1	114.1	7.3	7.3	329.8	329.8
	1993	93.4	98.2	6.1	7.3	306.1	353.3
	1994	67.8	67.4	5.0	6.6	263.6	338.2
	1995	56.7	50.7	3.8	5.8	240.5	340.9
	1996	31.1	16.1	2.9	5.4	184.8	297.4
Percentage of GDP							
	1992	4.2	4.2	1.5	1.5	5.6	5.6
	1993	3.2	3.4	1.2	1.5	4.9	5.6
	1994	2.2	2.2	0.9	1.2	4.0	5.1
	1995	1.8	1.6	0.7	1.0	3.4	4.7
	1996	0.9	0.5	0.5	0.9	2.4	3.8
Real interest rate (percentage[c])							
	1992	4.5	4.5	3.9	3.9	4.2	4.2
	1996	3.6	3.4	4.5	4.5	5.6	6.1
Unemployment rate (percentage)							
	1992	6.7	6.7	2.7	2.7	7.3	7.3
	1996	6.2	4.5	3.2	3.1	5.4	5.1
Growth of key indicators, 1993-1996 (average annual percentage change)							
GDP		1.8	2.4	3.4	3.7	3.3	3.7
Investment		0.8	1.4	3.9	3.9	6.6	10.6
Saving		2.0	3.8	3.4	4.2	8.0	10.1
Private consumption deflator		3.6	3.7	2.1	2.3	3.9	4.1

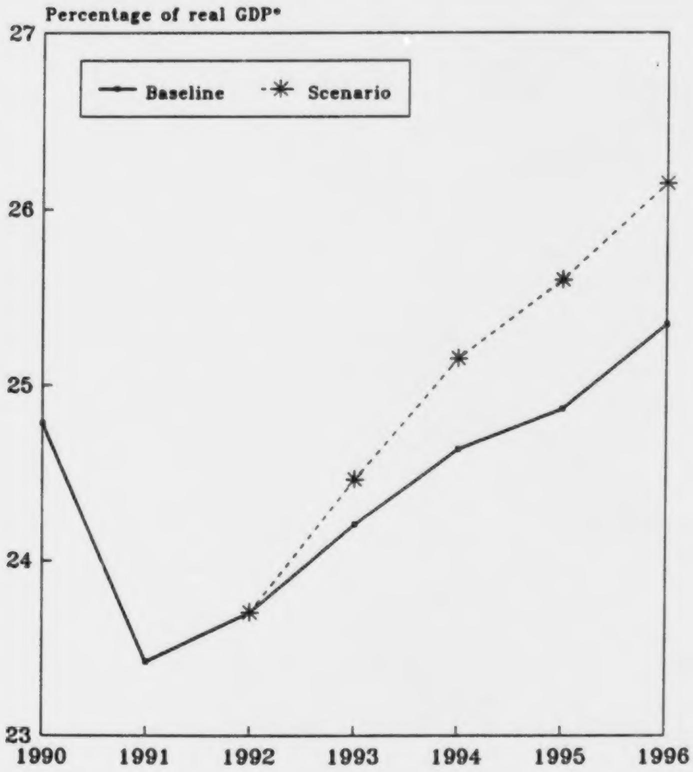
Source: UN/DESD, based on Project LINK (see the text for a description of the scenario).

[a] Western Germany only.

[b] For Germany, billions of deutsche mark; for Japan, trillions of yen; for United States, billions of dollars.

[c] Short-term interest rates deflated by change in GNP deflators (for Germany, money market rate; for Japan, bank loan rate; for United States, prime rate).

Figure IV.7. World investment, 1990-1996



Source: UN/DESD.

* Valued in 1980 prices and exchange rates.

CHAPTER V

ENERGY: RECENT DEVELOPMENTS AND EMERGING TRENDS

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CHAPTER V

ENERGY: RECENT DEVELOPMENTS AND EMERGING TRENDS

This chapter consists of three sections. The first section provides an overview of the oil market in the aftermath of the Persian Gulf crisis and an outlook for the 1990s.

The second section examines global natural gas prospects and addresses opportunities and constraints in its evolution as an important source in meeting a higher share of the world's energy needs. It raises key issues relevant to the development of natural gas demand, supply and trade, and assesses its potential in the future energy mix of major groups of countries.

The third section considers the energy situation in the least developed countries and highlights their dependence on petroleum imports and their vulnerabilty to energy crises. The fall in oil prices since 1986 may have helped to alleviate their payment difficulties in the short term. Over the longer term, however, their need for more assistance may become more urgent. Such assistance should be directed more towards exploration and development of indigenous energy resources and improvements in the efficiency of energy use and production, particularly in the electricity sector.

The international oil market

Following a period of unprecedented price volatility, which lasted throughout the Gulf crisis from August 1990 to January 1991, the oil market in 1991 settled into a period of tranquility, with a few gyrations upwards and downwards, despite the disintegration of the Soviet Union and uncertainties regarding its ailing oil industry. In late 1991, Soviet oil output reached its lowest level in 15 years because of technical and logistical problems as well as general disorganisation caused by political instabilty.

More than a year has passed since the end of the Persian Gulf war, but normalcy has not yet completely returned to the oil market. The timing and extent of the worldwide oil industry's return to normal activities hinge on the magnitude and timing of the resumption of oil exports by Iraq and Kuwait.

Although Kuwait's oil exports were resumed late last summer and have recently picked up some momentum, Iraq's exports are still embargoed. Without the oil facilities of Iraq and Kuwait, the rest of the world oil industry was in 1991 operating at a high level of capacity utilization in both production and refining.

However, because of sluggish world oil demand and OPEC overproduction, oil prices weakened in late 1991, falling to about $16 a barrel, or $5 below OPEC's target price of $21 per barrel. Weak oil prices continued during the first quarter of 1992, although prices then increased somewhat because of uncertainties with regard to Libyan oil supplies.

The evolution of oil prices in the short-term will depend on a variety of factors, such as the timing and magnitude of the resumption of economic growth in industrial countries and elsewhere, the volume of oil production in the former Soviet Union and the participation of international oil companies in the overhaul of its oil industry. It will also depend on the implementation of ongoing and announced plans for expanding oil production capacities in major OPEC countries and the resulting margin of spare capacity in the world oil supply system.

In 1991, world oil demand was relatively weak due to mild weather conditions, increased conservation efforts and low economic growth, particularly in the industrial countries. On a regional basis, total oil consumption in the developed market economies is estimated to have remained virtually flat in 1991, with increases in Western Europe and the Pacific offset by declines in North America. In Eastern Europe and the Commonwealth of Independent States, oil cosumption continued to decline mainly due to the adjustment problems of the former centrally planned economies. In the developing countries, growth in total oil consumption was relatively strong, especially in the rapidly growing economies of Asia.

World oil output declined slightly, but OPEC production reached its highest level in almost a decade. Output in the former Soviet Union continued to decline significantly. Elsewhere, production increased moderately.

A factor of paramount importance that helped create a rough balance between supply and demand in the aftermath of the loss of exports from Iraq and Kuwait was the ability of OPEC to expand capacity quickly and significantly. This decisive expansion of output allayed fears of an oil supply shortfall, but it has since prompted new concerns of oversupply. It is possible that these quick developments on the supply front may have delayed the expansion programmes needed to meet the substantial growth of oil demand expected during the 1990s.

Most experts agree that in the 1990s demand for OPEC oil, especially from the Persian Gulf, will increase substantially because of abundant reserves and low costs. At present, OPEC produces only 40 per cent of the world's output but possesses 78 per cent of the world's proven reserves of one trillion barrels. The Persian Gulf contains two-thirds of these reserves and is the most significant source of incremental supply in the future. Despite these vast oil reserves, raising the required finance to expand capacity will be a major challenge to OPEC countries, most of which have serious financial problems.

The anticipated resumption of growth in world oil demand and the increasing concentration of supplies in OPEC countries, particularly in the Persian Gulf region, focus attention on the need for cooperation between major participants in the international oil market to insure that incremental production capacities will be sufficient to match incremental oil demand in an environment of reasonable price stability.

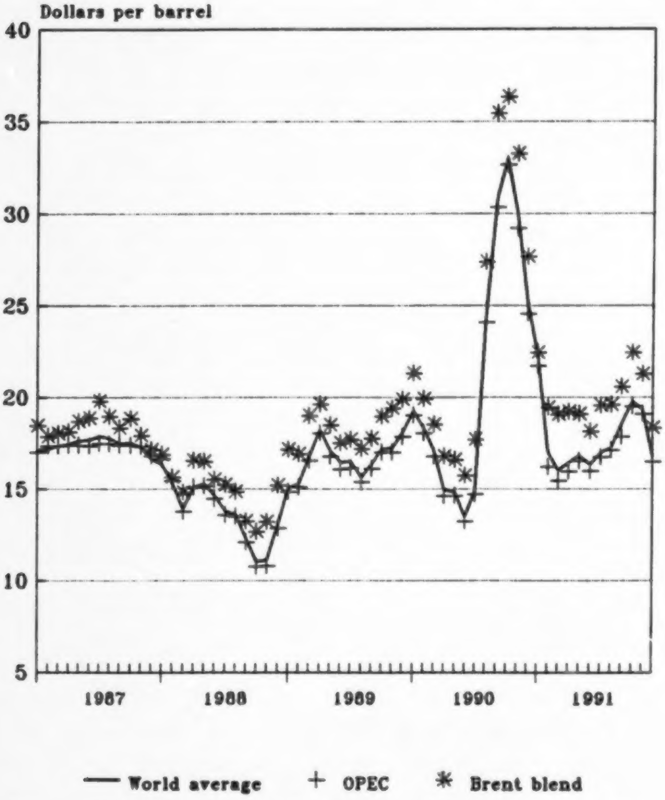
The uncertainty over OPEC's ability to expand capacity may be allayed by the new reintegration of the oil industry, in which the major international oil companies are being offered joint ventures and partnership in some OPEC countries which had previously nationalized their oil industries. Similarly, producers are expanding investments in the downstream end of consumer markets. These developments may mark the beginning of a new era of cooperation among the principal participants in the energy market. The aim of such cooperation should be to provide security of supply to consumers and security of markets to producers in a mutually acceptable framework beneficial to all. The recent crisis in the Gulf brought into sharp focus the need for such cooperation and led to preliminary talks and exchanges of views between producing and consuming countries and international oil companies. The continuation of this dialogue will be essential in view of the very large investments involved; according to an estimate below, they may exceed $1 trillion for the rest of the decade.

Oil price movements

For the whole of 1991, the average price of the OPEC basket of seven crudes was $18.65 a barrel, or $2.35 less than the minimum reference price of $21 a barrel set at the OPEC meeting in July 1990. Comparable prices for 1990 and 1989 were $22.26 and $17.31 per barrel, respectively (see figure V.1).

The volatility and high prices during the Persian Gulf crisis were due to fears of supply interruptions from the possible destruction of oilfields in Saudi Arabia and tankers in the Persian Gulf. That no emergency oil stocks were released by the member countries

Figure V.1. Crude oil prices, f.o.b.



Source: UN/DESD, based on United States Department of Energy, Energy Information Administration, *Weekly Petroleum Status Report*, various issues.

of the International Energy Agency added to these uncertainties. Fears of supply interruptions dissipated with the outbreak of the war, causing oil prices to tumble by one-third and confounding earlier predictions that they might rise to $100 a barrel with the start of ground hostilities.

Since the beginning of the Gulf crisis in August 1990, all OPEC countries have been producing at full capacity to meet the loss of supply from Iraq and Kuwait. With demand relatively weak, surplus production by OPEC became evident early in 1991. However, uncertainties with regard to declining Soviet oil output as well as depressed production in the North Sea kept prices fairly buoyant throughout mid-1991, the agreement of the OPEC market monitoring committee in March 1991 to reduce output by 5 per cent to an informal quota of 22.3 million barrels per day through voluntary cuts provided strong price support.

Towards the end of the second quarter of 1991, prices began to weaken, prompting several OPEC member countries to voice concern. At the OPEC Conference in June 1991, the oil ministers tentatively agreed to keep production ceiling at 22.3 million barrels per day for the third quarter of the year despite conflicting views of market fundamentals.

During most of the second half of the year, declining Soviet oil production and a steady fall in export volumes added to speculations about supply tightness in the winter and kept prices hovering around $19 a barrel.

In anticipation of higher oil demand for the winter, OPEC members, at their meeting on 24-25 September 1991, raised their ceiling to 23.65 million barrels per day without setting firm quotas for individual members. Following that meeting, OPEC oil production rose to 23.9 million barrels per day in October and 24.0 million barrels per day in November without any erosion of prices. However, as OPEC output continued to climb and earlier expectations of an end to recession and strong winter demand for oil failed to materialize, oil prices dropped to around $17 a barrel in early December. At the same time, oil production and exports of the former Soviet Union's various republics had stabilized despite political disarray there. Moreover, the possibility of the resumption of Iraqi exports following reports that Iraq was to meet with the United Nations representatives in January exerted downward pressure on prices. Prices remained weak in January 1992 despite voluntary production cuts by several OPEC members. The agreement reached in the February 1992 OPEC Ministerial meeting to reduce production to 22.9 million barrels per day did nothing to shore up oil prices.

The recent declines in oil prices have deeply hurt the income of many OPEC countries. Many of them have serious financial difficulties, having based their economic plans on the basis of a price close to the OPEC target of $21 a barrel. Oil revenues for OPEC as a whole are estimated at $134 billion in 1991, as compared to $147 billion in 1990 (see table A.39).

Oil consumption remains depressed

Following the precipitous decline in oil prices in early 1986, world oil consumption grew at about 2.3 per cent per annum for three years. However, in 1990 and 1991, demand for oil remained almost stagnant, rising at only 0.3 per cent and 0.2 per cent, respectively (see table A.40).

Oil is still the largest source of commercial energy worldwide despite two decades of efforts to change the energy mix in favour of other energy sources. In 1990, oil accounted for approximately 39 per cent of global commercial energy, followed by coal (27 per cent), natural gas (22 per cent), and primary electricity (12 per cent). After a considerable increase during the 1970s, oil demand in the 1980s continued to grow relatively fast in developing countries while it declined in the developed market economies as well as in Eastern Europe and the Soviet Union.

Between 1980 and 1985, demand for oil in the developed market economies fell by about 2.0 per cent per annum owing to the introduction of energy conservation measures, improvements in energy efficiency and substitution away from oil in response to the large price increases of the 1970s. However, lower oil prices since 1986 reversed this trend and oil consumption has risen by 2.5 million barrels per day, or 1.4 per cent per annum. The increase was particularly noticeable in the Pacific region, where demand rose by 0.9 million barrels per day, or 17.3 per cent. In Western Europe demand increased by 1 million barrels per day, or 8.2 per cent, whereas in North America, demand grew by only 0.5 million barrels per day, or 2.8 per cent.

In 1991, consumption in the developed market economies remained at the 1990 level. Small increases in demand in Western Europe and the Pacific were more than offset by declines in North America. The growth of demand in Western Europe was mainly due to German demand for fuel oil, which replaced high-sulphur coal for electricity generation in the former German Democratic Republic. In North America, consumption continued to decline for the second year in a row, mainly because of mild weather and economic recession. Oil consumption in the developed market economies in 1991 was still 9 per cent below the peak level of 1979.

In developing countries, oil consumption has grown considerably faster than in the developed market economies. It rose at an average annual rate of 4.2 per cent during the period 1986-1991, reflecting rapid urbanization and increasing industrialization and also limited possibilities for substitution of oil. Much of the growth was in Asia, where oil demand increased by 2.2 million barrels per day, or about 7 per cent per year. The surge in demand was most apparent in the rapidly industrializing countries of the Republic of Korea, Singapore, Taiwan Province of China and Thailand, where demand for oil has grown at double-digit annual rates in recent years.

In the other developing countries of Africa and Latin America as well as the oil-exporting countries, oil demand grew more slowly in 1991, and growth in oil demand in the developing countries as a group is estimated at 3.3 per cent.

Following rapid growth in the 1970s, oil demand in Eastern Europe and the Soviet Union stabilized in the early 1980s and then declined through the rest of the decade. It was the only region where demand declined during the period 1986-1991. In 1991, oil consumption in the former Soviet Union and in Eastern Europe fell by a further 4 per cent, as compared to 1990.

World crude oil production

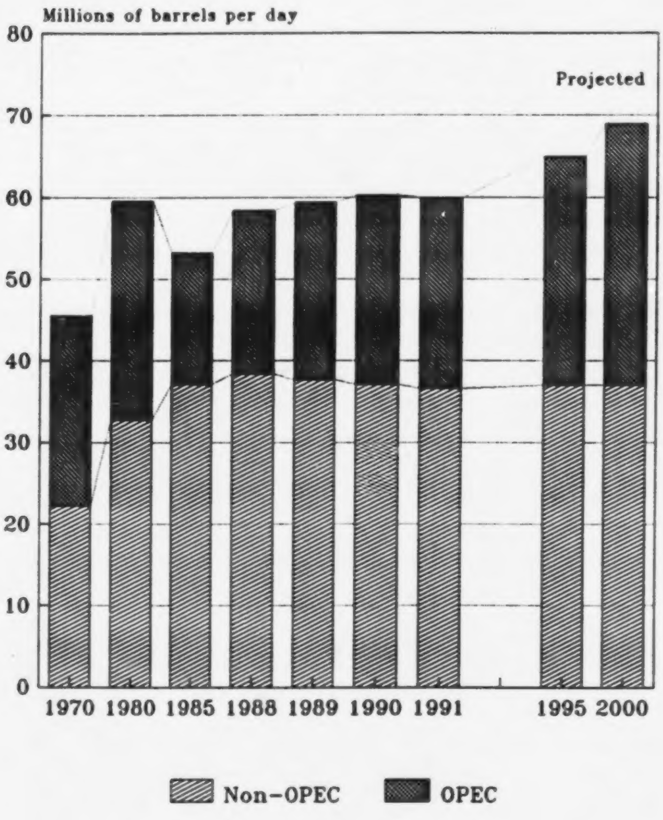
OPEC production continued to rise in 1991, although at a slower pace than in previous years, while total non-OPEC production declined, mainly because of the sizeable drop in output in the former Soviet Union (see table A.41). Production continued to rise in a number of other developing countries and production from the North Sea reached a record level, reflecting a surge in output from the Norwegian sector.

The increase in world oil demand since 1985 and the virtual stagnation in non-OPEC supplies caused by the fall in output in the United States and more recently in the former Soviet Union have raised the OPEC market share over the past six years from 30 to 39 per cent (see figure V.2).

OPEC production patterns and policies during 1991 have demonstrated a new determination to keep and enhance market share by providing security of supply to consumers even at the risk of somewhat lower prices. Despite the loss of oil from Iraq and Kuwait, OPEC output rose over the levels in 1990 and 1989. This increase in output, however, has led to more concentration of supplies, with Saudi Arabia's share rising from 25 per cent in 1989 to 35 per cent in 1991 (see Table A.42).

Output of the non-OPEC oil-exporting developing countries continued to grow the second half of the 1980s. The increased output from these countries has resulted from

Figure V.2. World crude oil production



Source: UN/DESD.

expansion of existing capacities and development of new discoveries in a number of countries, including Angola, Colombia, Egypt, Malaysia, Oman, the Syrian Arab Republic and Yemen. As a result, total output has increased by some 3 per cent a year between 1985 and 1990. In 1991, it rose by another 3 per cent to 10.3 million barrels per day.

In the oil-importing developing countries, oil production decelerated considerably in the second half of the 1980s, which reflected slow-down in exploration and development. It grew at an average annual rate of 1.6 per cent as compared to 12 per cent between between 1980 and 1985. In 1991, total production grew by 3.3 per cent to 2.16 million barrels per day.

The growth in oil output of the developed market economies throughout the 1970s and early 1980s came to an end with the collapse of oil prices in early 1986. Since then, their crude oil production has dropped by 5 per cent. The drop was especially significant in the United States, where crude oil production in 1991 was 18 per cent below its 1986 level.

However, in 1991, total crude oil production in the developed market economies rose for the first time in six years increasing by 2.7 per cent. Although production in the United States increased marginally in 1991, the downward trend is expected to continue. In Canada, crude oil output remained essentially unchanged in 1991, with a small decline in conventional crude production offset by an increase in synthetic crude production. However, recent reductions in government financial support for exploration and development of conventional as well as tar sand projects may be expected to result in lower production in the near future.

In the North Sea, crude oil production in the United Kingdom recorded a decline of 3.8 per cent, but crude oil output in Norway reached record levels. The decline in output in the United Kingdom was largely due to disruptions from a series of shutdowns for repairs and refurbishment in a number of platforms. Substantial incremental crude oil output from the U.K. sector of the North Sea is unlikely at current price levels, but with the commissioning of new smaller fields, total production may, in the absence of platform maintenance problems, rise during the next few years.

The Norwegian level achieved in 1991 resulted primarily from the commissioning of additional platforms in new fields. Despite the expected decline in Statford production, the expansion of output in more recent fields and the coming on stream of new ones are expected to set Norwegian output for further growth in much of the 1990s.

Among other developed market economies, there was an increase in Denmark, where crude production rose by 16 per cent, to 0.14 million barrels per day, making the country self-sufficient in oil for the first time since production began in 1972[1]. In Australia, crude output declined by 5.7 per cent from the record level achieved in 1990. With some relatively large offshore fields in their early phase of production, the decline may be temporary, resulting from the downturn in exploration and development activities in 1991.

In 1991, output in the former Soviet Union plunged to its lowest level in more than 15 years, as a result of technical problems that have beset the oil industry for years. These include declining well productivity, reduction in upstream oil investments, outdated equipment and shortages of materials and technical supplies as well as general disorganisation. Crude oil output reached an all-time peak of 12.5 million barrels in 1987 and 1988, but fell to 12.17 million barrels per day in 1989 and to 11.4 million barrels per day in 1990. A further decline to 10.3 million barrels per day was estimated for 1991. Exports of crude oil and petroleum products are estimated to have declined to 3.05 million barrels per day in 1990 from a record of 4.1 million barrels per day in 1988, and to have fallen another 30 per cent, to 2.1 million barrels per day in 1991.

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[1] International Energy Agency, *End-December Oil Market Report*, 10 January 1992, p. 9.

Foreign oil companies have been discussing a variety of joint ventures with local Soviet firms. However, political, economic, legal and contractual obstacles have stood in the way. The devolution of the institutional authority of the oil industry to the new republics is expected to clarify the situation for oil and gas investors, leading to wider international participation. In view of the favourable potential and geological prospects, external financial and technological participation is expected to have considerable impact on future production levels.

Practically all of the large reserves of the former Soviet Union are located in only four republics: Russia, Kazakhstan, Azerbaijan and Turkmanistan. Table V.1 shows an estimated breakdown of oil production by republic recently published by the International Energy Agency. About 90 per cent of output is accounted for by Russia.

Oil production in all Eastern European countries declined sharply in 1991. In Romania, the only one with significant oil reserves, output dropped by 19 per cent. Some of the East European countries with favourable geological conditions and good exploration potential are promoting joint venture participation with international oil companies.

The oil industry in the 1990s

Much of the uncertainty about the future of the world petroleum industry in the 1990s is due to the continuing political instability in major oil exporting areas. Adding to the uncertainty is the increasing concentration of production capacities in these areas, and the continuing separation between the owners of reserves and the coordinators of petroleum technologies, finance and markets. Increasing environmental concerns which affect oil consumption policies, are also bound to influence the future of the oil industry.

At present, half of the world's oil supply is traded internationally. With the exception of Australia, Canada, Norway and the United Kingdom, all industrial countries including the countries of Central and Eastern Europe are net importers of oil. In the developing world, some thirty countries, including the OPEC members, are net oil exporters, while about one hundred countries and territories are net oil importers. Both Russia and China are net oil exporters, but this may change unless there is a massive infusion of foreign capital, technology and expertise in the near future.

Although world oil demand has been sluggish the past two years due to recession and weather conditions, it is expected to resume growth soon. Most forecasts expect it to increase by at least 1 million barrels per day per year for the rest of this decade. Such a rise in incremental supplies can only be provided by the massive oil reserves of the OPEC countries (see table V.2). Of the world's proven oil reserves of 1 trillion barrels, 78 per cent is in OPEC countries, 67 per cent in the Persian Gulf alone. If these countries were to produce at the current rate without ever discovering additional oil, their reserves would last for nearly 100 years. The Persian Gulf also has the lowest production costs. Increasing oil demand need not be inhibited by the availability of reserves or rising costs for a long time to come.

Table V.1. Oil production[a] in the former USSR, 1988-1991 (Million barrels per day)

	1988	1989	1990	1991[b]
Russia	11.41	11.10	10.40	9.32
Kazakhstan	0.51	0.51	0.50	0.50
Azerbaijan	0.27	0.26	0.24	0.22
Others	0.43	0.40	0.39	0.37
Total	12.62	12.27	11.53	10.41

Source: International Energy Agency, Monthly Oil Market Report, 5 February 1992, p.11.

[a] Includes, condensate and natural gas liquids.

[b] Estimated.

Table V.2. World proved oil reserves, end 1979 - end 1991

	End 1979		End 1991	
	Millions of barrels	Percentage of world	Millions of barrels	Percentage of world
Developed market economies	58 796	9.2	47 555	4.8
Eastern Europe and the USSR	70 000	10.9	58 774	5.9
Developing countries	512 545	79.9	884 682	89.3
OPEC member countries	435 611	67.9	769 392	77.6
Other oil-exporting countries	69 930	10.9	101 826	10.3
Oil-importing countries	7 004	1.1	13 464	1.4
World total[a]	641 341	100.0	991 011	100.0

Source: UN/DESD, based on Oil and Gas Journal, 24 December 1979 and 30 December 1991.

[a] Totals may not add up because of rounding.

With the resumed growth in world oil demand and the anticipated stagnation in non-OPEC supplies, demand for OPEC oil is expected to reach 27 to 28 million barrels per day by 1995 and 30 to 32 million barrels per day by 2000. This would lead to a gradual tightening of market conditions unless production capacity is expanded. As shown in table V.3, OPEC capacities are almost fully utilized at the present time, while surplus capacities will again occur after the mid-1990s if announced capacity expansion plans by OPEC members are implemented fully. Surplus production capacities are essential as safety margins against political instability, which has often caused sharp temporary cuts in oil supplies (e.g., Iranian revolution, Iran-Iraq war, Persian Gulf crisis).

An investment of $10,000 to $15,000 is required to raise production capacity by one barrel per day. On this basis, OPEC has estimated that expanding capacity by five million barrels per day will cost over $50 billion. Other estimates[2] indicate that in non-OPEC countries, approximately $80 to $100 billion will be needed to maintain output at 40 million

Table V.3. Estimated OPEC production capacity
(Million barrels per day)

	1991	1995	2000
Demand for OPEC oil (including NGL[a])	24.5	27.8	31.5
Demand for OPEC crude (excluding NGL[a])	22.7	25.7	29.2
OPEC crude capacity	23.6[b]	33.81[c]	37.5
OPEC excess capacity	0.9	8.1	8.3
Percentage of capacity utilization	96.3	75.9	77.7

Source: UN/DESD, based on Ian Seymour, "OPEC in the 1990s", Middle East Economic Survey, 3 June 1991.

[a] Natural gas liquids.

[b] No export capacity from Iraq or Kuwait.

[c] Iraqi and Kuwaiti export capacity restored to pre-war levels.

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[2] John Browne, "Upstream oil in the 1990's: the prospects for a new world order", *British Petroleum Speech Reprint*, p. 6.

barrels per day and in OPEC countries, over $150 billion will be required to sustain current output level and add an extra 8 to 10 million barrels per day of incremental production by the year 2000.

The growing awareness of shared responsibilities for the security of both supply and demand in an environment of reasonable price stability is bringing the major participants in the international oil market together in an effort to increase transparency. The producer-consumer dialogue which took place at the invitation of the Governments of France and Venezuela at a ministerial seminar held in Paris on 1 and 2 July 1991, had as its primary objective the promotion of mutual understanding in order to facilitate this process.

If the necessary investments are undertaken by producing countries in cooperation with oil companies under new arrangements, it may lead to a re-integration of the oil industry and a reduction in the volatility of oil prices. But international cooperation with the involvement of governments as well as financial institutions may be necessary because of the large investments needed not only in the upstream sector of the oil industry but even more so downstream. Expansion of refining and transportation capacities, storage, distribution and marketing will call for even more capital than exploration and development. Figure V.3 presents some estimates of upstream and downstream investments needed to meet oil demand growth in the 1990s.[3]

Investment in new tankers and replacement of old ones is estimated at $120 billion. Adding to this some 50,000 miles of additional oil and gas pipelines at an average cost of $1 million per mile, the total capital cost for transportation is $180 billion. New construction of 10 million barrels per day refining capacity and conversion and upgrading of capacity at existing refineries will require $250 billion. Finally, investment in storage, distribution and marketing, service stations and logistics is projected at some $340 billion.

Excluding investments in petrochemicals, total oil industry investment needs are, therefore, likely to exceed $1 trillion over the remainder of the decade.

The increasing dependence of consuming countries on OPEC oil, have stimulated attempts to diversify supplies through regional rather than global arrangements. To this end, proposals have been made for an American continental energy policy and an European Energy Charter.

Apart from the increasing dependence on OPEC oil, there is also a dependence on natural gas imports from several OPEC countries (e.g., Algeria, Indonesia, the Islamic Republic of Iran, Libya, Nigeria, Qatar, the United Arab Emirates and Venezuela). Natural gas projects provide an opportunity for further cooperation between petroleum companies and host governments as their capital and high technology requirements necessitate long-term arrangements for security of supply and markets.

The international gas market:
Recent developments and future prospects

The use of natural gas has not been commensurate with its availability largely due to the high investments and costs of its transportation and distribution. However, in recent

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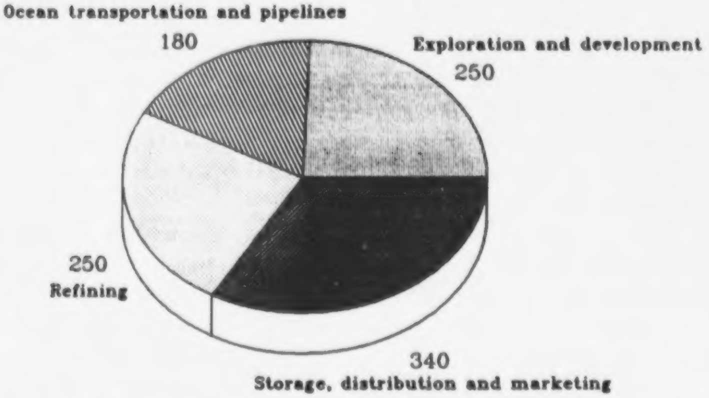
[3] Walter L. Newton, "Oil industry investment needs in the 1990's: will $1 trillion be enough? will it be available?", *Petroleum Intelligence Weekly*, 13 January 1992, p. 7.

Figure V.3. Estimated capital expenditure requirements of the oil industry in the 1990s

(Billions of dollars)



Source: UN/DESD, based on Walter L. Newton, "Oil industry investment needs in the 1990s: will $1 trillion be enough? will it be available?", *Petroleum Intelligence Weekly*, 13 January 1992, p. 7.

years, natural gas has received increasing attention as it is an abundant, versatile and environmentally less polluting fuel.

At present, world proved gas reserves are estimated to be the energy equivalent of about 785 billion barrels of crude oil, approximately 80 per cent of world proved oil reserves. Yet, natural gas provides only half of the energy supplied by oil, or 22 per cent of total world supply of commercial energy.

Greater environmental awareness, increased emphasis on interfuel substitution, and the expansion of gas markets in developing countries are expected to create opportunities for producers to supply gas to rapidly expanding markets in the future. With gas no longer regarded as a scarce and premium fuel, its penetration into such markets as electricity generation, will contribute significantly to market growth in many developed countries. The availability of new technologies which use gas more efficiently, such as combined-cycle electricity generating plants, will make for further market growth.

The expansion of gas markets will also depend on the development of international gas trade. This will, in turn, depend on a number of important factors, such as the flexibility of trade arrangements and long-term investment schemes as well as the reliability of gas supply at prices that are acceptable to both producers and consumers.

At present, the volume of gas traded internationally amounts to 15.8 per cent of world consumption, of which four-fifths is transported by pipelines and one-fifth in the form of liquified natural gas (LNG) by special tankers. The former USSR is the largest exporter by pipeline, accounting for about half of the international gas trade by pipeline with annual exports of 110 billion cubic meters (bcm), followed by Canada and the Netherlands with 40 bcm and 36 bcm, respectively. International LNG trade is dominated by Indonesia, accounting for 40 per cent of total exports with annual volumes of 28 bcm, followed by Algeria at 19 bcm and Malaysia at 8.6 bcm.

Natural gas reserves

The world's natural gas reserves may be two to three times the 119 trillion cubic metres (tcm) of gas now estimated as proved reserves. Estimated proved reserves are commonly defined as those supplies remaining in the ground, which geological and engineering data demonstrate with reasonable certainty to be recoverable from known reservoirs under existing economic and operating conditions.

Until recently, exploration effort rarely targeted natural gas, which was regarded as much less valuable than oil. In remote locations, particularly in developing countries, gas discoveries were often abandoned as worthless. Some of these remote gas deposits have begun to acquire commercial status in the last decade or so.

Since most natural gas outside North America and Western Europe has been found as a byproduct of the search for oil, many other areas still have great potential. When more of the world's gas prospects are explored and additional drilling activities at greater depths are undertaken, the overall proved reserves may turn out to be much larger than oil reserves. Since 1950, gas reserves have been doubling every ten years.

Table V.4 gives some recent estimates of proved gas reserves by region. The present reserves would be sufficient to maintain current rates of world gas consumption for another 58 years. Although gas reserves are widely distributed among about 80 countries, the lion's share is located in a few places: the former Soviet Union, Algeria, Iran, Qatar, Saudi Arabia and the United Arab Emirates. Together, they account for three quarters of the total.

Although natural gas reserves of developing countries account for half the world total, they are mostly located in the oil-exporting countries, including the member countries of OPEC. Natural gas reserves of oil-importing developing countries are very modest, and they have barely begun to be exploited. In these countries, where oil import bills constitute a heavy burden on the balance of payments, the development and use of indigenous gas resources could contribute significantly to energy availability and economic growth.

Geographical distribution of reserves

As shown in figure V.4, the former Soviet Union accounts for about 40 per cent of the world's gas reserves. Most of these reserves are located in Western Siberia. By the end of 1991, the former Soviet Union had 1097 gas fields, of which 500 are on stream or under

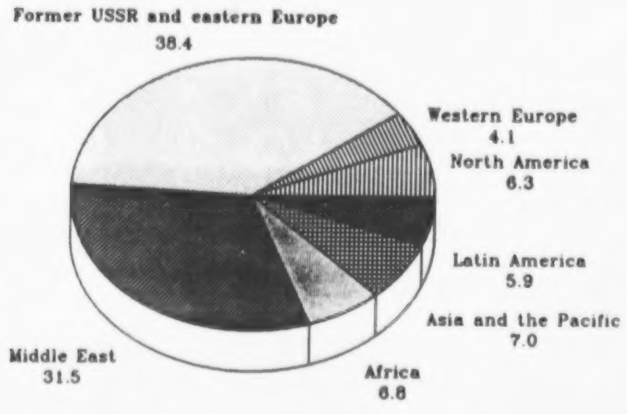
Table V.4. Proved gas reserves at the end of 1990

	Trillion cubic metres	Percentage of world	Reserves-to-Production Ratio (Years)
Developed market economies	13.0	10.9	16
Former USSR and Eastern Europe	45.9	38.4	54
Developing countries	60.3	50.5	160
OPEC member countries	49.4	41.4	238
Other oil-exporting countries	7.1	5.9	69
Oil-importing countries	3.8	3.2	57
World total	119.4	100.0	58

Source: UN/DESD, based on *Oil and Gas Journal*, 31 December 1990.

Figure V.4. Geographical distribution of gas reserves at end 1990

(Percentage of world total)



Source: UN/DESD, based on *Oil and Gas Journal*, 31 December 1990.

development. The bulk of these reserves are in a few big fields each with reserves in excess of 300 bcm.

The Persian Gulf countries have the second largest accumulations of proved gas reserves, nearly 30 per cent of the world total. Although these reserves are much easier to develop than the Russian reserves, they have hardly been exploited. Most of the gas produced in these countries is in the form of associated gas, a large part of which is being flared or reinjected in oilfields to repressure reservoirs. At present, the only significant shipments of natural gas from the Persian Gulf move from the United Arab Emirates in the form of LNG to Japan and from Iran through a pipeline to the former Soviet Union. However, huge programmes of gas development are being planned or under way in Iran and Qatar. These aim at pipeline exports from Iran to Central Europe and Asia, and LNG exports from Qatar to Japan and other markets.

The developed market economies have only 12 per cent of the global proved gas reserves but produce 40 per cent of the world output. Current proved reserves are mainly in the United States, Canada, Norway, the Netherlands and the United Kingdom. Production in many of these countries has already peaked and is expected to decline.

Natural gas reserves in Latin America amount to 6 per cent of the world total and have been developed on a commercial scale in ten countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Trinidad and Tobago, and Venezuela. Argentina, Mexico and Venezuela have the largest reserves in the region and are by far the largest producers, accounting for three quarters of the volumes produced in the region in 1990. The modest natural gas reserves in Asia have begun to be extensively developed in recent years and may start to run out soon as consumption is growing rapidly.

Exploration, development and production

As in oil exploration, the introduction of three-dimensional seismic surveys and advanced computer technology have made gas exploration more efficient and reduced the risk of dry holes. The three-fold increase in natural gas reserves in the past two decades is a reflection of this.

Natural gas is found either in free form or associated with crude oil. Associated gas includes dissolved gas and free gas contained in a "gas cap" overlaying the crude oil in the reservoir. Non-associated gas is produced from reservoirs containing only gas, usually called "dry gas".

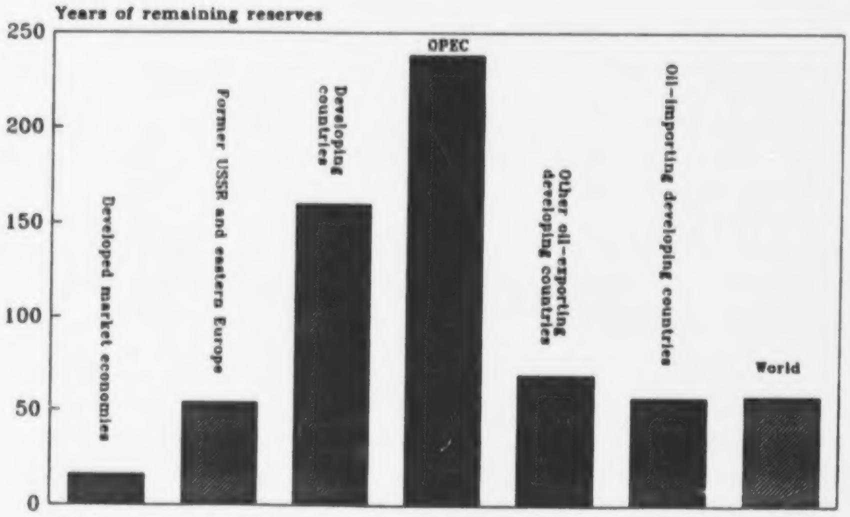
Associated gas separates out when pressure drops as oil is extracted from the reservoirs. In general, the rate of production of associated gas is determined by the rate of production of the accompanying crude oil. With primary production techniques, usually less than one-third of the oil originally in place is produced. However, with the application of enhanced oil recovery methods, more oil can be produced and more gas can be recovered. Recovery from non-associated gas reservoirs, on the other hand, usually averages more than two-thirds of the gas in place.

Because of the long lead times and the large investments required to develop and transport natural gas, the discovery of gas does not automatically create a source of supply if is not commercially justified to develop the reserves. The price of gas, the distance to markets, the size of the reservoir, and the quality of the gas must be taken into account when evaluating the viability of developing gas reserves.

Technical costs of gas production are usually only slightly higher than those of oil, but the higher investment costs of gathering gas and bringing it to the market give oil an economic advantage over equally distant gas. Moreover, whether gas is transported by pipelines or by special tankers, a local network is required to distribute the gas to consumers. In developing countries in particular, the lack of financial resources to construct domestic gas networks is a big impediment.

At present, about 62 developing countries are known to have some gas reserves, including 28 that are oil importers. Because of high economic costs and lack of markets, 28 of these countries have so far not developed their indigenous gas resources. Overall, developing countries consume less than 0.5 per cent per year of their 60 trillion cubic metres of proved gas reserves. By comparison, the developed market economies consume the equivalent of 7 per cent per year of their gas reserves, which are estimated to be able to maintain current production for another 16 years (see figure V.5). However, as gas reserves close to existing markets become depleted, increasing quantities of gas will have to be developed and transported from more remote areas.

Figure V.5. Natural gas reserves-to-production ratios



Source: UN/DESD, based on *BP Statistical Review of World Energy*, June 1991.

World marketed production of natural gas rose from 1090 bcm in 1970 to 2060 bcm in 1990, at an average growth rate of 3.3 per cent per year (see table V.5). There have been significant changes in the relative structure of supply and demand. Output in the developed market economies as a whole remained roughly at the same level during the past two decades, but its share of global production has dropped from 73 per cent to 40 per cent over the same period. The major producers of the developed market economies are the United States, Canada, the Netherlands, United Kingdom and Norway.

Between 1970 and 1990, natural gas production in the former Soviet Union more than tripled, increasing at an average rate of 7.5 per cent per year, and in 1983, the Soviet Union took the lead from the United States as the world's largest producer of natural gas and by 1990, it accounted for 38 per cent of world production and 36 per cent of world exports of natural gas. This was the result of the development of major gas and gas condensate fields in Western Siberia, Turkmenistan and the Caspian lowlands. In the past 5 years alone, production in Western Siberia has grown by 40 per cent and since the completion of the pipeline through which gas from the Urengoy field is delivered to Western Europe, total exports have escalated to over 110 bcm per year.

Despite a five-fold increase in the past two decades, natural gas production in developing countries is still well below potential, although 40 countries produce it. With 50 per cent of the world's proved reserves, developing countries account for only 18 per cent of world production. Over four-fifths of this is accounted for by oil-exporting countries.

Table V.5. World marketed natural gas production
(Billion cubic metres)

	1970	1980	1990	Percentage of world, 1990
Developed market economies	798	847	829	40.2
Former USSR and Eastern Europe	229	491	857	41.5
Developing countries	60	176	378	18.3
OPEC member countries	27	84	208	10.1
Other oil-exporting countries	19	66	103	5.0
Oil-importing countries	14	26	67	3.2
World total	1 087	1 514	2 064	100.0

Source: UN/DESD, based on Oil and Gas Journal, various issues; and Petroleum Economist, August 1991.

Algeria is the largest producer followed by Indonesia, Saudi Arabia, Mexico, Iran and Argentina. These six countries produced over half of all the gas produced in developing countries in 1990. Libya, Nigeria, Qatar, the United Arab Emirates and Venezuela also have considerable potential.

South East Asia is one of the most dynamic producing regions. The natural gas industry in this region is growing rapidly owing to the expansion of domestic gas use, particularly for electric power generation and exports to Japan.

Although the Persian Gulf states have approximately one-third of the world proved reserves of gas, they account for only 4 to 5 per cent of world production. Most of the gas produced in the Gulf is associated with oil, and a large portion of it is either flared or reinjected. Recently, most of the countries in the region have reduced flaring of associated gas and embarked on gasification of their domestic markets.

In Africa, Algeria which produces 70 per cent of the gas of the continent maintains its dominant position as the principal exporter of natural gas to Europe. In addition to its trans-Mediterranean pipeline across Tunisia to Italy, Algeria has embarked on a plan to expand its export capacity through the construction of a pipeline via Morocco and Gibraltar to Spain. Algeria is also expanding its LNG exports to Japan and the United States. Elsewhere in Africa, the only important gas producers are Nigeria and Libya. Out of 20 countries in Africa with proven gas reserves, only eight have commercial production.

In Latin America, ten countries produce natural gas on a commercial scale. Mexico, Argentina and Venezuela are the largest producers, accounting for 80 per cent of marketed production in the region in 1990. Venezuela has embarked on a joint venture with Shell, Exxon and Mitsubishi to develop a 4.4 million ton (6.1 bcm) per year LNG project, and other projects are being considered in Peru, Bolivia and Trinidad and Tobago.

No consistent information on the amounts of gas being flared or reinjected in all countries is available, but it is estimated that out of 2380 bcm of gross production in 1988, 85 bcm were vented and flared, 200 bcm were reinjected into reservoirs, 85 bcm were extracted in the processing of natural gas plant liquids and the rest was available as dry natural gas.[4] Algeria, Canada, Iran, the U.S. and Venezuela account for 79 per cent of all reinjected gas.[5]

Investment constraints for gas development in developing countries have eased somewhat in recent years because of the willingness of international oil companies to participate in the development of gas reserves in exchange for competitive pricing in domestic markets (e.g., Egypt and Pakistan). Similarly, in a few oil-exporting countries, gas is being used as a substitute for oil in order to increase oil export capacities (e.g., Egypt, Syrian Arab Republic, Indonesia, Nigeria).

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[4] *International Energy Annual*, Energy Information Administration, United States Department of Energy, February 1991, p. 59.

[5] Ferdinand E. Banks, "Some new developments on the natural gas front", *OPEC Bulletin*, May 1990, p. 11.

Natural gas consumption

In 1990, natural gas provided 22 per cent of world primary energy consumption, oil 39 per cent, coal 27 per cent, hydro 7 per cent and nuclear 6 per cent.

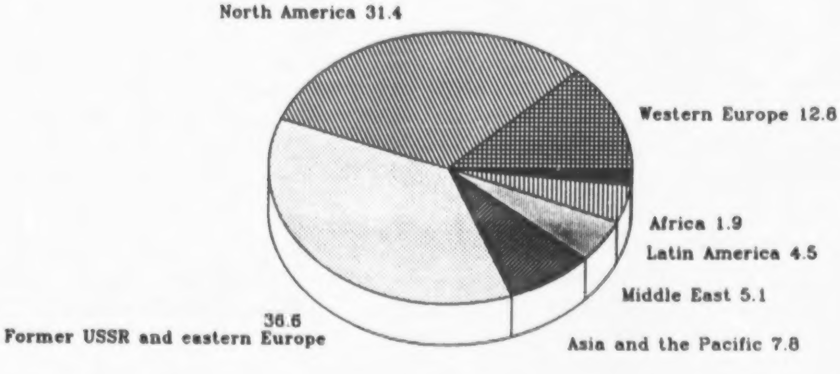
In most of the developed market economies and in the former Soviet Union, widespread natural gas infrastructures have been established for household consumption and industrial purposes, but natural gas networks in developing countries are still very limited. A regional breakdown of natural gas consumption is shown in figure V.6.

In 1990, the share of developing countries in world consumption of gas was 15 per cent as compared to 32 per cent for coal and 25 per cent for oil. Nearly half of the gas consumed was in the countries of OPEC where there is a relatively strong natural gas market mainly for electric power and petrochemicals (see table V.6).

In 1990, natural gas accounted for 12 per cent of overall commercial energy demand in developing countries as compared to 38 per cent in Eastern Europe and the former Soviet Union and 20 per cent in the developed market economies. In OPEC markets, the share is particularly high at 42 per cent, whereas in the other developing countries, the share

Figure V.6. Natural gas consumption by region

(Percentage of world total)



Source: UN/DESD, based on *BP Statistical Review of World Energy*, June 1991.

Table V.6. World consumption of natural gas
(billion cubic metres)

	1970	1980	1990	Percentage of world 1990
Developed market economies	733	850	928	48.0
Former USSR and Eastern Europe	214	428	707	35.6
Developing countries	56	147	297	15.4
OPEC member countries	27	64	133	6.9
Other oil-exporting countries	19	56	75	3.9
Oil-importing countries	10	27	89	4.6
World total	1 003	1 425	1 932	100.0

Source: UN/DESD, based on *Energy Statistics Yearbook*, various issues; and *BP Statistical Review of World Energy*, June 1991.

is only 9 per cent. As of 1990, natural gas was consumed in only 15 oil-importing developing countries.

In developing countries, industry and electric power generation are the dominant end-use sectors, while residential gas use accounts for less than 10 per cent of the total (see table V.7). In Asia, industry is the predominant end-use sector, with China, India, Indonesia, Malaysia and Pakistan as the principal consumers. In Africa, power generation is the largest consumer of natural gas, and demand increases rapidly, notably in Algeria, Egypt, Libya and Nigeria. In Latin America, power generation and industry both use gas extensively. In the Middle East, a large portion of natural gas is used for power generation, particularly in Saudi Arabia, but industry is the leading end-use sector in Iran and Kuwait.

In recent years, natural gas networks have been constructed in several developing countries, where gas is being promoted as a substitute for oil, either to ease the pressure on demand for oil products or to augment oil export capacities. The countries with a developed gas industry, notably Argentina and Pakistan, demonstrate the versatile role which gas can play to meet a large portion of energy demand.

Gas use in developing countries will continue to be inhibited by local availability and the high cost of its infrastructure. However, where economies of scale can offset the higher costs of transportation and distribution systems, gas demand is expected to increase rapidly.

There has been a rapid expansion of gas markets in Western Europe in the past two decades, but gas use in the United States went down until 1987 when demand turned up.

Table V.7. Natural gas consumption by end-use sector in developing countries
(Per cent)

Sector	Power generation	Industrial and raw material	Residential/ commercial
Africa	80.5	16.0	3.5
Asia	38.5	53.0	8.5
Latin America	47.5	43.0	9.5
Middle East	60.0	34.0	6.0

Source: UN/DESD, based on CEDIGAS.

In the 1970s and early 1980s, the development of natural gas in some countries was constrained by expectations that the low cost gas resource base was shrinking and that prices would escalate. Energy policy was aimed at conserving gas reserves for high priority users such as residences and hospitals and phasing out gas demand from industry and electricity generation. These attitudes have changed in recent years and now natural gas is regarded as the energy medium of choice for all end-use sectors.

Although there has been a revival of gas use in industry and electricity generation in recent years, residential and commercial use absorb most of natural gas in North America and Western Europe, typically accounting for 40 to 50 per cent of gas consumption. The natural gas market in Japan is different from those in Western Europe and North America. Japan relies almost entirely on LNG imports, of which over 70 per cent is used for electric power generation. In the mid-1970s, a number of long-term LNG contracts were implemented for supplying large combined-cycle electricity generating plants. Gas demand increased from almost nothing to 50 billion cubic metres in 1990, equivalent to nearly 1 million barrels of oil per day. The Japanese demand for LNG derives from a deliberate policy aimed at diversifying energy sources and reducing the country's dependence on imported oil. More recently, Japan has shown a commitment to environmental improvement, which could lead to further increases in gas demand.

Natural gas consumption in Eastern Europe and the Soviet Union more than tripled between 1970 and 1990, growing from less than 200 million tons of oil equivalent to 637 mtoe. Almost 90 per cent was consumed in the USSR. The share of gas in total primary energy consumption stands at 38 per cent. Oil and coal account for 29 per cent and 26 per cent, respectively. In the Soviet Union natural gas provided approximately 42 per cent of energy requirements, but in the countries of Eastern Europe only 20 per cent of the total.

That share is expected to increase as the countries of Eastern Europe seek to alleviate their massive environmental problems by reducing the use of coal and lignite.

International gas trade

The international trade in natural gas amounted to 306 billion cubic meters in 1990. Of this, 76 per cent was transported by pipeline; the remainder was shipped by tankers in the form of LNG. The major exporters and importers are shown in table V.8. Out of 56 gas trade contracts in operation in 1990, 53 were for the markets of Western Europe, North America, Eastern Europe and the Far East.

Transoceanic gas shipments by tankers can cost up to five times as much as crude oil transport on an energy equivalent basis and transport by pipelines twice as much. Because of the large differences in heating value between oil and gas, a typical oil pipeline can transport almost five times as much energy as a high-pressure gas pipeline of the same diameter. This implies that if a gas pipeline is to carry the same capacity as an oil pipeline, its diameter must be larger and its wall must be thicker, which makes it more expensive.

Table V.8. International gas trade in 1990
(billion cubic metres)

To: From:	Former USSR	Canada	Netherlands	Algeria	Indonesia	Norway	Malaysia	Brunei	Total Others	Imports
Germany	29.3		19.9			8.0			0.4	57.6
Japan				0.1	23.5		8.6	7.2	8.5	47.9
United States		40.2		2.5						42.7
Italy	13.8		5.9	11.1						30.8
France	10.0		4.6	9.3		5.7				29.6
Czechoslovakia	12.6									12.6
Belgium			3.9	3.9		2.3				10.1
Poland	8.4									8.4
United Kingdom				0.1		7.5				7.6
Romania	7.3									7.3
Bulgaria	6.8									6.8
Hungary	6.3									6.3
Others	15.9		1.3	4.4	4.2	2.3			10.0	38.1
Total exports	110.4	40.2	35.6	31.4	27.6	25.8	8.6	7.2	19.0	305.8

Source: UN/DESD, based on BP Statistical Review of World Energy, June 1991.

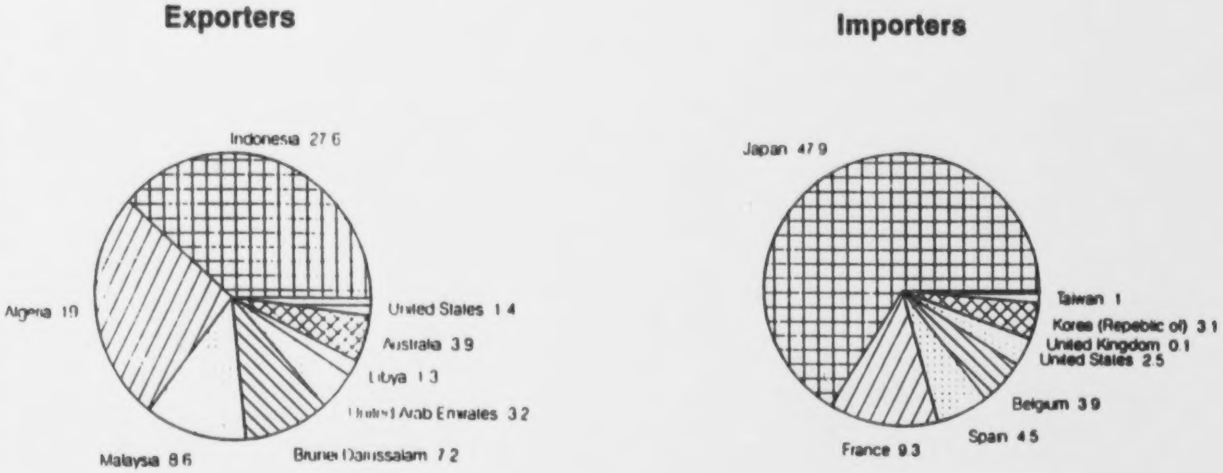
Liquefied natural gas trade

When it is not possible to lay pipelines through very deep oceans or very long distances, gas transport by specialized double-walled LNG tankers is the alternative.

When natural gas is liquified by cooling to around -162 degrees Celsius (-260 degrees Fahrenheit), its volume is reduced to 1/600 of the gaseous volume. This makes tanker transportation economically feasible. At the receiving end, the LNG is warmed in regasification facilities and returned to its gaseous state.

The share of LNG in the world trade in natural gas has been increasing steadily since 1973. LNG trade is currently confined to eight exporters and eight importers (figure V.7). Indonesia is by far the largest exporter. Nearly 85 per cent of its export go to Japan, where it accounts for 50 per cent of total LNG imports. New LNG liquefaction plants are being built in Indonesia to meet the rapidly rising regional demand driven by strong economic growth and environmental concerns.

Figure V.7. International trade by
LNG tankers in 1990
(Billion cubic metres)



Source: UN/DESD, based on BP Statistical Review of World Energy, June 1991.

Japan is the world's largest consumer of LNG; it imported 48 billion cubic meters, or 66 per cent of all LNG trade in 1990, and its LNG consumption could rise to perhaps 60 bcm by the end of the century[6]. The LNG markets of the Republic of Korea and Taiwan, Province of China are also developing rapidly and imports there are expected to double or treble in the 1990s.

The growth of demand in these countries has led to the signing of additional supply contracts with Indonesia and new contracts from Malaysia. In addition to the capacity expansion programme already underway in Indonesia, Malaysia and Brunei are making extra volumes available to importers; Malaysia intends to double its export capacity to 21 bcm per year by 1997.[7] Another potential supplier of LNG to the Far East market is Australia. In 1990, Australia exported 3.9 billion cubic meters of LNG to Japan. Further expansion of Australia's LNG capacity is expected in the next few years as gas fields off the northwest coast come on stream.

Algeria continues to expand its LNG supply capacity, and in 1990 it exported to seven countries, including Japan and the United States. Exports to the U.S., which stopped in 1987, were resumed in 1988 and reached 2.5 bcm in 1990. Exports to Japan are still at a minute level, amounting to 0.1 bcm in 1990. Most of the Algerian LNG trade, however, is committed to the close market of Europe, with France, Belgium and Spain being the largest buyers, importing 16.4 bcm in 1990. Sonatrach, the state-owned oil and gas company, has embarked on a number of projects aimed at expanding gas trade by LNG as well as by pipeline. The expansion programme of LNG is designed to increase capacity from about 20 bcm per year to 32 bcm per year. A further plan to expand capacity to over 50 bcm per year is expected to be initiated in 1995.

Nigeria has large gas reserves and recently started an LNG project; exports are due to begin in the second half of the decade. Agreements in principle have been secured to sell LNG to France, Italy, Spain and the United States. Deliveries will be for a period of 22.5 years, beginning in early 1997. Deliveries of LNG from Libya to Spain, its only customer in 1990, amounted to 1.3 bcm. Libya is considering whether to expand LNG capacity or to construct a trans-Mediterranean pipeline to Europe.

In the Middle East, the only LNG exporter so far is Abu Dhabi, which for the last several years, has been exporting LNG to Japan. However, the first phase of a giant gas project in Qatar was completed in 1991. So far, Qatar has secured an agreement in principle involving the marketing of over 5 bcm per year for a 25-year period to a Japanese electric utility. Deliveries are expected to start in January 1997. The north gas field in Qatar is the largest in the world with proven reserves in excess of 4000 bcm.

A potentially large future supplier is Venezuela, which plans a joint venture with a supply capacity of about 10 bcm per year based on the gas reserves in the Gulf of Paria to be marketed in the United States in the second half of this decade. Another new LNG supplier may be Norway, where several studies on the possibility of marketing LNG in the U.S. have been carried out.

Existing forecasts of world demand for LNG are about 90 bcm per year by the turn of the century. With Japan accounting for two thirds of LNG trade, much of which is used for electricity generation, future trends of LNG supplies will be influenced by developments of the power generation sector in that country. A key issue will be the extent to which Japan's nuclear power development programmes are implemented in the country.

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[6] "Green and Growing markets", *Petroleum Economist*, August 1990, p. 11.

[7] "Consolidation versus competition", *Petroleum Economist*, August 1991, p. 9.

But, future LNG demand will also depend on flexibility in long term LNG sales agreements, confidence in the long term stability of prices at levels that repay costs and still allow gas to compete with other fuels, and on advances in LNG engineering to cut costs of plant and equipment.[8]

Gas trade by pipeline

The commonly used form of transporting natural gas is by pipeline. Improvements in pipeline technology over the years include large-diameter pipes and deep-water pipelaying techniques. However, the capital costs of transporting gas over long distances are high and international gas trade by pipeline has developed mainly on a regional scale. The list of regional gas pipelines is large, but the most important ones transport gas from the former Soviet Union to Eastern and Western Europe, from Canada to the United States, from the Netherlands and Norway to Western Europe and from Algeria to Italy. These account for 98 per cent of the world's gas pipeline trade in 1990. On a smaller scale, gas pipelines also exist between Mexico and the United States, Bolivia and Argentina, Algeria and Tunisia, Iraq and Kuwait (before the Persian Gulf crisis), and Iran and Afghanistan to the former USSR.

In 1990, the Soviet Union was the leading exporter of gas by pipeline, with a share of 47 per cent (figure V.8). The most important markets for piped gas are Germany, with a share of 25 per cent and the United States, with 17 per cent. The countries of Eastern Europe are particularly reliant on gas from the former Soviet Union, where they depend on a pipeline network established under an old CMEA agreement.

New pipeline projects are in various stages of study, planning or completion. One of the largest is the proposed 775 miles pipeline to transport Algerian gas via Morocco and Gibraltar to Spain. The project is expected to cost $1.3 billion and completion is scheduled for the end of 1995.[9] Initial deliveries to Morocco and Spain are planned to be about 10 bcm per year, which may be doubled once pipeline connections are extended to France and Portugal. Algeria is also studying the feasibility of expanding capacity of its existing trans-Mediterranean pipeline, through which some 12 bcm per year is being supplied to Italy.

Despite current weakness in natural gas prices in North America, new pipeline projects and expansion of existing ones connecting Canada to the United States are in various phases of completion or planning. The largest will transport gas from Western Canada to the Northeast markets of the United States. The project, costing about 2.5 billion Canadian dollars and including nearly 1000 miles of lines is scheduled for completion by the end of 1992. The pipeline is expected to boost Canadian export capacity to the U.S. by about 7 bcm per year.

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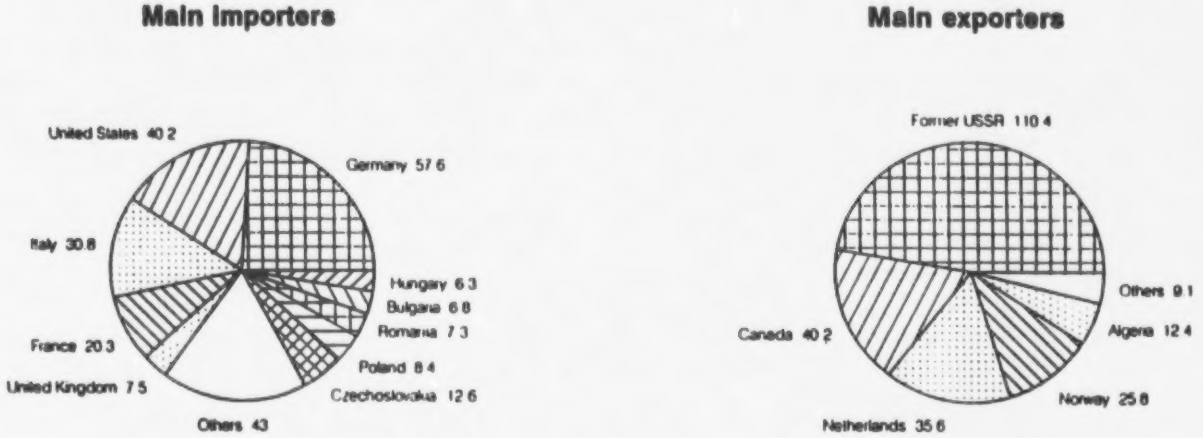
[8] "World gas outlook: tempered optimism", *Oil and Gas Journal*, 22 July 1991, p. 22.

[9] "Growing demand for gas spawns pipeline projects", the *Oil and Gas Journal*, 9 September 1991, p. 25.

Figure V.8. International gas trade
by pipeline
(billion cubic metres)



Source: UN/DESD, based on BP Statistical Review of World Energy, June 1991.

Despite past extensive negotiations concerning regional trade of natural gas in Latin America, the only existing operation is the export of 2.2 bcm per year of piped gas from Bolivia to Argentina under two contracts, which are due to expire in April 1992.

No gas trade by pipeline exists in Asia, where some of the largest gas producers and potential gas markets are found. This has prompted interest in an ambitious plan to link the main producing areas of Malaysia and Indonesia to the Philippines, Singapore and Thailand. Although little progress has been achieved since the drafting of the plan in 1989, the pipeline will, when completed, be capable of transporting about 20 bcm per year.

Another project is the Peninsula Gas Utilization Project currently underway in Malaysia. When completed, it will supply gas to the fast-growing power generation sector in Singapore. The power generation sector in Thailand, which has been growing by over 10 per cent per annum in recent years is also planning to import gas from Malaysia.

Petrovietnam, the national petroleum company of Viet Nam, and the Petroleum Authority of Thailand have recently reached an agreement in principle to form a joint venture involving the constuction of a $140 million gas processing plant.[10] The plant would use offshore associated gas in Viet Nam, have an annual capacity of 300 million cubic metres, and export to Thailand. The development of the gas discoveries in Myanmar and more recently in Viet Nam could prove an attractive option for the supply of domestic markets as well as for export to the fast growing gas markets in Thailand. Similarly, the vast gas reserves in Bangladesh may be developed further not only for domestic consumption but also for exports to India.

In what would be considered one of the biggest pipeline projects ever, Japan is planning to build a 2000 miles gas transmission pipeline linking Sakhalin Island in eastern Russia to southern Japan.[11] An agreement to construct this line has recently been signed by 32 natural gas, power and trading companies. The project is expected to cost 3 trillion yen ($23.6 billion) and be completed by 2005.

With 14 per cent of world reserves, and less than 1 per cent of world consumption, Iran is also exploring the possibilities of pipeline exports to both Asia and Europe. However, no definite plans have been announced.

Energy in the least developed countries

The vulnerability of the least developed countries (LDCs) to energy crises once again came to the fore during the Persian Gulf crisis, which revived concerns about their extreme dependence on imported oil. Although many of them received bilateral and multilateral assistance to cushion the impact of the crisis, supply shortfalls and high import bills constituted serious though temporary external shocks.

The least developed countries, as officially defined by the UN, are 47[12] and have a total population of over 500 million, with an average per capita income of just over $250 per year.

While there are at least as many people living in deep poverty in other developing countries, the least developed countries are not only poor but tend to get poorer. Development is not taking hold and they are heavily dependent on international assistance for development programmes and in many cases even for financing of ordinary government services. Though uniformly poor, they differ greatly in their resource endowments, and generalizations about their energy situation can be misleading.

Commercial primary energy consumption in the least developed countries was 23.7 million tons of oil equivalent (toe) in 1989. Per capita commercial energy consumption of the LDCs averaged 48 Kg of oil equivalent as compared to 4350 Kg for the developed market economies (see table V.9).

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[10] "Thailand, Viet Nam agree to tap offshore associated gas", *Oil and Gas Journal*, 30 December 1991, p. 26.

[11] "Japan eyes lengthy gas line project", *Oil and Gas Journal*, 30 December 1991, p. 35.

[12] The list of the least developed countries comprises: Afghanistan, Bangladesh, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Ethiopia, Gambia, Guinea, Guinea Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zaire, Zambia.

The least developed countries continue to depend heavily on traditional forms of energy such as fuelwood, charcoal and bagasse. Such energy sources provide about 75 per cent of LDC's total energy consumption as compared to 25 per cent for all developing countries.

Energy consumption

The difficulty of generalizing about the LDCs is apparent in their energy use in the 1980s. Their aggregate use of commercial energy grew steadily at 4.5 per cent per annum in the 1970s and 1980s, but rising oil prices in 1979-80 held back oil consumption and stimulated the development of alternative domestic energy sources, particularly natural gas which increased at 18 per cent a year in the 1980s. This is correct but fails to make the point that natural gas was used in only four of the 47 countries in the group (Afghnistan, Bangladesh, Myanmar, and Rwanda). At the other extreme, fifteen countries depended exclusively on oil.

In 1989, gross energy imports of LDCs amounted to 19.1 million toe and accounted for 80 per cent of their total commercial energy consumption. Imports contributed more than 90 per cent of energy consumption in 29 countries. Sixteen of these countries depended totally on imports. Four countries (Afghanistan, Benin, Yemen and Zaire) were net energy exporters.

Table V.9. Commercial primary energy consumption
in the least developed countries
(thousand metric tons of oil equivalent)

	1970	1980	1989
Oil	8 133	12 129	14 625
Natural gas	159	1 461	6 387
Coal	1 591	1 158	939
Hydropower	581	1 826	1 711
Total	10 464	16 574	23 662

Source: UN/DESD, Energy Statistics Yearbook, various issues.

Oil and natural gas

Only Bangladesh, Benin, Myanmar, Yemen and Zaire produce any oil (see table V.10). Commercial production of natural gas takes place only in Afghanistan, Bangladesh and Myanmar. Except for Myanmar, Yemen and Zaire, all LDCs are net oil importers. Yemen became an oil exporter in late 1987 after the completion of a pipeline connecting two major oil fields to a port terminal on the Red Sea. In 1990, crude oil production in Yemen averaged 179 thousand barrels per day. After a peak of 7.3 thousand barrels per day in 1986, production in Benin has declined to 4 thousand barrels per day in 1990. Output in Myanmar has also dropped from about 33 thousand barrels per day in 1985 to 13 thousand barrels per day in 1990. In Banbladesh, oil production is still negligeable, amounting to less than a thousand barrels per day. In Zaire, output has been on the decline since 1986.

Table V.10. Crude oil production in the LDCs
(thousand barrels)

Country	1970	1980	1985	1986	1987	1988	1990
Bangladesh	0	44	161	168	183	329	329
Benin	0	0	2 379	2 665	2 555	1 679	1 460
Myanmar	5 825	11 381	11 972	10 439	7 358	5 475	4 745
Yemen	0	0	0	2 577	6 570	62 927	65 335
Zaire	..	8 030	11 133	11 717	11 607	10 768	10 620
Total	5 825	19 455	25 645	27 568	28 273	81 178	82 489

Source: UN/DESD, based on *Energy Statistics Yearbook*, 1982 and 1987 (United Nations publications, Sales Nos. E.F. 84.XVII.4 and E.F. 88.SVII.3); and *Oil and Gas Journal*, various issues.

At least eight of the LDCs have known gas reserves (table V.11). Some of these gas finds were discovered in the course of oil exploration but have hardly been evaluated or developed due to lack of capital and incentives. Only in Bangladesh, which has proven gas reserves estimated at 12.7 trillion cubic feet, is there significant natural gas production. Some 80 per cent of current output of 500 million cubic feet per day is used for power generation and fertilizer manufacture, with the rest consumed in residential, commercial and

Table V.11. Proved oil and gas reserves of the LDCs
(Oil: millions of barrels)
(Gas: billion cubic feet)

Country	End 1980		End 1985		End 1990	
	Oil	Gas	Oil	Gas	Oil	Gas
Bangladesh	0	8 000	0	7 000	0.5	12 700
Benin	0	0	100	...	100	...
Mozambique	-	-	-	-	-	2 290
Myanmar	25	135	28	170	51	9 430
Somalia	-	-	-	-	-	210
Sudan	-	-	...	...	300	3 000
United Republic of Tanzania	-	-	-	...	-	4 100
Yemen	0	0	0	0	4 000	7 000
Zaire	130	50	110	30	56	30

Sources: UN/DESD, based on Oil and Gas Journal, various issues.

industrial sectors. The exploitation of these resources could meet the future domestic requirements of Bangladesh and generate foreign exchange.

Natural gas production in Myanmar was 110 million cubic feet per day in 1987 but has declined in 1989. Afghanistan has natural gas reserves estimated at 5.3 trillion cubic feet, and output in the recent past produced 240 million cubic feet per day, much of which was exported to the Soviet Union.

Activity in exploration and development has continually declined in the LDCs during the period 1982-1988, with the exception of countries with already established crude oil production. This reflected a general slowing in the pace of exploration by international oil companies as well as the relinquishment of acreage considered unprospective in view of the decline in oil prices. The sharpest decline in exploration took place in African countries without proven petroleum potential. Exploratory and development drilling took place only in Yemen and activities such as exploration, licensing of acreage, and seismic surveys declined towards the end of the 1980s.

With increasing urbanization and industrialization, the LDCs will increase their consumption of commercial energy, especially oil. Given their inadequate energy infrastructure, other forms of energy such as natural gas, coal or electricity would not be readily substituted for oil. Oil and natural gas exploration and development programmes must be pursued despite the obvious impediments.

Coal

Only ten LDCs have known coal reserves. Nine of them have some production at the present time (see tables V.12 and V.13). The estimates of coal reserves include some coal that is technically accessible but only at costs far in excess of prices likely to be obtained within the foreseeable future. With the second largest deposits of coal in Africa, Botswana has proved recoverable coal reserves amounting to 3.5 billion metric tons, with proved coal in place estimated at twice that amount. Production of coal in Botswana rose in the last two decades from 12 thousand tons in 1970 to about 576 thousand tons in 1987.

In Mozambique, coal production is now only a fraction of the level reached in the late 1970s due to political disruption and difficulties of transport. Production peaked in 1980 and 1981 at about 400 thousand tons and declined to about 40 thousand tons in 1987. Production in Zaire and Zambia has also declined in recent years. In Malawi, the prospects of most of the coal deposits were considered to be poor, but with the disruption of coal supply from Mozambique and the rapid increase in the cost of coal from Zambia and Zimbabwe, a coal mine was opened in the northern part of Malawi in 1985. It currently contributes some 30 per cent of the country's coal consumption.

Table V.12. Production of coal and lignite in the LDCs
(thousand metric tons of coal equivalent)

Country	1970	1980	1985	1987	1989
Afghanistan	164	145	151	167	145
Botswana	12	360	432	576	..
Mozambique	351	400	35	43	42
Myanmar	11	18	60	52	52
Niger	0	0	61	153	157
United Republic of Tanzania	3	4	4	3	3
Zaire	..	138	115	122	125
Zambia	623	488	430	390	335

Source: UN/DESD, based on Energy Statistics Yearbook, various issues.

Table V.13. Estimated coal reserves in the LDCs at end 19878
(million metric tons)

Country	Proved amount in place	Proved recoverable reserves	Type
Afghanistan	112	66	Bituminous
Bangladesh	1 054	...	Bituminous
Botswana	7 000	3 500	Bituminous
Malawi	25	12	Bituminous
Mozambique	240	240	Bituminous
Myanmar	4.5	2.3	Bituminous/sub-bituminous
Niger	45	...	
United Republic of Tanzania	304	200	Bituminous
Zaire	600	200	Bituminous
Zambia	69	55	Sub-bituminous

Source: World Energy Conference, 1989 Survey of Energy Resources.

Tanzania's proved recoverable coal reserves are estimated at about 200 million tons, but production averaged only 3 thousand tons in 1989. Total production of coal in Niger was about 157 thousand tons in 1989 after an increase from 30 thousand tons in 1981. All the coal produced was consumed locally for electricity generation. Myanmar's production of coal declined from about 69 thousand tons in 1986 to about 52 thousand tons in 1987 and has since stabilized at that level. In Afghanistan, production reached 167 thousand tons in 1987 but declined to 145 thousand tons in 1989.

There is ample scope for coal development in some LDCs, but there is pervasive uncertainty about prices and demand, the ability to finance and expand coal production, and the environmental acceptability of coal. It is therefore doubtful that LDCs with coal reserves could achieve appreciable gains in export markets in the foreseeable future. It is expected that the main markets for the relatively small recoverable reserves in LDCs will continue to be the domestic electricity generation sectors.

Fuelwood and other biomass account for the bulk of household energy in most LDCs. In some African LDCs, 90 per cent of total energy consumption is provided by non-commercial fuels. This puts great pressure on a progressively deforested local environment.

Rural fuelwood is rapidly exhausted despite the steady migration of rural population to cities. For example, demand for fuelwood is estimated to be 2.5 times the sustainable yield in Ethiopia and two times the yield in Sudan.[13]

Electricity

Electricity use in LDCs was 34 billion kilowatt-hours (KWH) in 1989, about 68 KWH per capita, which may be compared to 5000 KWH for European countries. Electricity demand in the LDCs has grown about 4.1 per cent per year in the last two decades.

The price of oil is an important element in the cost of electricity generation in the LDCs. Most of these countries rely on oil-fired electricity generating plants. During the rise in oil prices in the 1970s, consumers of electricity in the LDCs were, for the most part, shielded from the impact of rising international oil prices. Demand for power rose about 7.0 per cent per year between 1973 and 1980 (table V.14). After the 1979-80 oil price

Table V.14. Electricity in the least developed countries

	Production capacity	Production	Utilization rate	Imports	Exports	Usage	
						Total	Per capita
	Quantities						
	(10^6KW)	(10^9KWH)	Per cent	(10^9KWH)	(10^9KWH)	(10^9KWH)	KWH/ per capita
1973	6.22	16.89	31.0	2.12	0.56	18.45	60.0
1980	10.68	41.13	44.0	0.60	13.55	28.57	71.0
1987	15.02	34.76	26.4	1.27	2.58	34.13	70.0
1989	16.37	34.75	25.0	1.17	3.07	34.03	68.0

Source: UN/DESD, Energy Statistics Yearbook, various issues.

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[13] United Nations Conference on Trade and Development, The Least Developed Countries 1988 Report, (United Nations publication, Sales No.E.89.II.D.3), P. 34.

increase, electricity tariffs were raised. These increases and the delays in passing on to final consumers the benefits of declining oil prices since 1981, retarded electricity demand growth in the LDCs during the 1980s. In the last few years, these effects have been reinforced by the stagnation or decline of incomes. Electricity demand growth dropped to only 2.0 per cent annually in 1980 - 1989.

There is approximately 16.4 million kilowatts (KW) net installed capacity of electricity generating plants exist in LDCs. About 40 per cent of this capacity is thermal (using oil, natural gas, or coal), and 60 per cent is hydroelectric. This production capacity generated approximately 34.8 billion KWH of electrical power in 1989, at a capacity utilization rate of only about 25 per cent. A great deal of generating capacity is technically obsolete and inefficient. By comparison, utilization rates for the developing countries as a whole and for the developed market economies are about 50 and 80 per cent, respectively.

Generating capacity in the LDCs grew by 6 per cent annually over the 1973 to 1989 period, whereas electricity output grew by 5 per cent, as the capacity utilization rate declined from 31 to 25 per cent.

There is some international trade in electricity among LDCs, especially in Africa. Benin, Burundi, Mozambique, Niger, Rwanda and Togo import a part of their power usage, and Uganda, Zaire and Zambia export some of their power output to neighboring countries. In Asia, Nepal is a net importer of electricity while Bhutan and the Lao People's Democratic Republic are net exporters. Overall, the LDCs imported 1.17 billion KWH and exported 3.07 billion KWH of electrical power in 1989.

Future trends and prospects and policy implications

The following projection is only an indication of a plausible development of aggregate energy demand in LDCs based on the assumption that GDP will rise at average annual rate of 3.1 per cent. The approach relies on the income elasticity of energy demand (the percentage change in energy consumption associated with one per cent change in GDP). Developing countries usually have an income elasticity greater than one, indicating that more energy is used to accompany marginal growth in real income.

Using historical data, the income elasticity of energy demand in the least developed countries was estimated at 1.4 per cent. Based on this and on expected GDP growth, their commercial energy consumption is projected to grow from 23.7 million toe in 1989 to 37.8 million toe by the year 2000 (see table V.15). This is equivalent to an average growth rate of 4.3 per cent a year.

Least developed countries will still be heavily dependent on oil at the end of the century. Demand for oil would increase from 14.6 million toe in 1989 to approximately 22.5 million toe, at an annual rate of 4 per cent. Future natural gas supply in LDCs will depend on developments in the two gas-rich countries, Afghanistan and Bangladesh.

These projections are dominated by a few large countries. Bangladesh alone accounted for nearly 23 per cent of the commercial energy in the least developed countries in 1989 and 56 per cent of the natural gas consumed in these countries. Five other countries (Afghanistan, Myanmar, Yemen, Zaire and Zambia) accounted for a further 41 per cent of the commercial energy consumed in all least developed countries.

In 1973-89, the rate of growth of electricity use in LDCs was 1.5 times that of the rate of growth of GDP. If this relationship persists over the next decade, electrical power

Table V.15. Estimated future commercial energy demand in the least developed countries (million tons of oil equivalent)

	1989	1995	2000
Total primary commercial energy	23.7	30.5	37.8
Liquid hydrocarbons	14.6	18.5	22.5

Source: UN/DESD.

use in these countries will reach over 50 billion KWH in the year 2000. This implies heavy capital requirements.

With more efficient utilization of existing capacity, these investment needs could be greatly reduced. The explanation for the high incidence of service interruptions lies in inadequate maintenance, lack of spare parts, and operating practices. In addition, transmission and distribution losses dissipate 20 per cent or more of gross electricity production in these countries as compared to the 10 per cent or less regarded as the norm for efficient operation. Technical losses associated with systems design, overloading of lines, and insufficient maintenance account for the bulk of such losses.

LDCs have to develop their indigenous energy resources. Special measures to assist these countries in their energy exploration and development are called for. Several LDCs are believed to have considerable potential for petroleum resources, but financing and modern technology are required for exploration and development. National efforts to revise petroleum laws and regulations in order to attract direct investment and international oil companies are needed.

Chapter VI

CONVERSION AND THE PEACE DIVIDEND: PROSPECTS AND EMERGING POLICY ISSUES IN THE DEVELOPED MARKET ECONOMIES

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Chapter VI

CONVERSION AND THE PEACE DIVIDEND: PROSPECTS AND EMERGING POLICY ISSUES IN THE DEVELOPED MARKET ECONOMIES

In the light of the end of the cold war, the potential gains from a reduction of military expenditures have been the subject of extensive debate. In 1991, transformation of the Soviet Union into the Commonwealth of Independent States reopened the debate on the "peace dividend" in the developed market economies. As long as a communist superpower existed, there was a case for its potential opponents to remain vigilant and not to revise drastically their military spending plans.

The cold war played a role in fuelling arms races in developing countries and in prolonging conflicts there. Since such conflicts were often seen by the major alliances as being primarily a reflection of their ideological differences, and largely caused by military assistance from the ideological rival to one party in a dispute, there was an incentive for all parties to look for a military solution. Resort to the military option was reflected in military assistance being extended to developing countries for strategic reasons. It also helped determine the configuration of the military forces of some members of the two alliances.

With the end of ideological confrontation, there is now a far greater possibility for the United Nations and other regional bodies to be effective in finding solutions to many conflicts. Possible involvement in peace-keeping operations and greater reliance on collective security could help decide the configuration of the armed services. In the *World Economic Survey, 1991*,[1] an analysis was provided of the economic implications of a reduction of military expenditures in industrialized and developing countries.

The results for developing countries of the end of the cold war could be faster development as resources absorbed in military expenditure, including arms imports, are redirected to civilian purposes and as the death and destruction caused by conflicts give way to reconciliation and a national consensus on peaceful development within democratic norms.

The historical reasons for the failure of the communist model in the Soviet Union are several, but one must surely be its high level of military expenditure, which entailed a vast diversion of resources in an attempt to maintain strategic parity with the United States. The resulting levels of military expenditure proved unsustainable as the overall economic performance of the Soviet Union slipped further behind world standards. The "new thinking" in Soviet foreign policy introduced by General-Secretary and, later, President Mikhail S. Gorbachev had, as one of its aims, the reduction in the size of the Soviet military budget and the conversion of military industries to civilian production.

If conversion in the Soviet Union had been as successful as its proponents had expected, this would have provided considerable support for arguments in the west that conversion should also be attempted there. However, conversion efforts in the Soviet Union did not meet with the success that had been hoped for, in that civilian production did not increase sharply as military production fell.[2] This was surprising to some observers, as it was claimed that one of the advantages of the centrally planned economic system was that it enabled resources to be redirected quickly to those areas where they were needed.[3] Recent discussions on conversion have confirmed that the nature of the economic system is itself a very important factor to consider in any analysis of this issue. In the present chapter, then, an assessment will be given of what can be expected as the developed market economies reduce their military spending.

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[1] United Nations publication, Sales No. E.91.II.C.1.

In the short run, cuts in military expenditure will have an effect on domestic demand. At a time of economic difficulty, when there might be a need for a boost to demand as appears to be the case in some developed countries at the present time, this macroeconomic effect could complicate matters.[4] Yet a reduction in military expenditure can free resources for alternative uses and so lead to greater long-term growth of the economy. It is aspects of the medium- to long-term transition to a peace economy that will be analysed here, rather than the short-term macroeconomic aspects of reductions in military expenditure.

Military manpower

Table VI.1 shows the size of the armed services of some of the principal developed market economies between 1960 and 1991. The end of the colonial empires of France and the United Kingdom was reflected in a sharp fall in the total size of the armed forces of those countries between 1960 and 1970. At the same time, Germany was assuming a more active role in the North Atlantic Treaty Organization (NATO) and its armed forces expanded rapidly. Japan's armed forces expanded broadly in step with population, although they remain comparatively small: in 1988, they were equivalent to 0.2 per cent of the population, compared with 0.9 per cent for NATO as a whole.[5] The size of the armed forces of the United States reached a peak in 1968, at over 3.5 million, at the height of that country's commitment to the Viet Nam war. By 1980, when the United States had turned to an all-volunteer force, the size of its armed services had fallen to just over 2 million.

The military build-up of the 1980s resulted in very large increases in military expenditure - in the United States, for example, by 38 per cent in real terms between 1981 and 1986. However, the size of the armed services increased less - in the United States, by 5 per cent between 1980 and 1985. In many other countries, the size of the armed services fell. The combined armed forces of the European members of NATO were larger than the total of the armed forces of the United States, but there was relatively little change over the

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[2] For an analysis of conversion in the former Soviet Union, see Stanislav Menshikov, "Experiences of Soviet conversion", paper prepared for the ECAAR-AEA Joint Panel on Utilizing Military Funds for Economic Development, New Orleans, 3 January 1992, and Michael Checinski, "The conversion of the Soviet arms industry", *Osteuropa Wirtschaft*, vol. 36, No. 1 (1991).

[3] See Julian Cooper, "The Soviet defence industry and conversion: the regional dimension", in *Defence Expenditure, Industrial Conversion and Local Employment*, Liba Paukert and Peter Richards, eds., (Geneva, International Labour Office, 1991), p. 158.

[4] See *World Economic Survey, 1991* (United Nations publication, Sales No. E.91.II.C.1) for a discussion of the macroeconomic effects of changing military expenditure.

[5] United States Arms Control and Disarmament Agency, *World Military Expenditure and Arms Transfers, 1989* (Washington, D.C., Government Printing Office, 1989), pp. 35 and 52.

10-year period. NATO includes Turkey, whose armed forces were greater than those of any other member except the United States.

Table VI.1. Armed forces in selected countries

(Thousands)

	United States	Japan	Germany	France	United Kingdom	Total
1960	2 514	206	270	781	520	4 291
1965	2 723	225	441	510	500	4 399
1968	3 547	235	440	505	405	5 132
1970	3 066	259	466	506	373	4 670
1975	2 130	236	495	503	345	3 709
1980	2 050	242	495	495	329	3 611
1985	2 152	243	478	464	327	3 664
1990	2 118	249	469	461	306	3 603
1991	2 030	246	476	453	300	3 505

Source: International Institute for Strategic Studies, *The Military Balance*, various years.

The expansion of military expenditure after 1980 could largely be accounted for by expansion of the procurement item of military budgets as countries improved the quality of equipment deployed. Figure VI.1 shows that between 1981 and 1987, NATO's procurement of major weapon systems in real terms increased by 54 per cent. With the relaxation of tensions after General-Secretary Mikhail S. Gorbachev came to power in the Soviet Union, NATO procurement fell by 16 per cent between 1987 and 1990.

The earlier build-up was very heavily concentrated in the United States: procurement there rose by 77 per cent between 1981 and 1987. Whereas in 1981 United States procurement of major weapons systems accounted for 59 per cent of NATO's total, by 1987, it accounted for 68 per cent.[6] This reflects the high level of sophistication of the weaponry employed, as well as United States possession and development of nuclear forces. In Japan, the industrial country with the largest military expenditure outside NATO, expenditure on procurement also rose rapidly in the 1980s.

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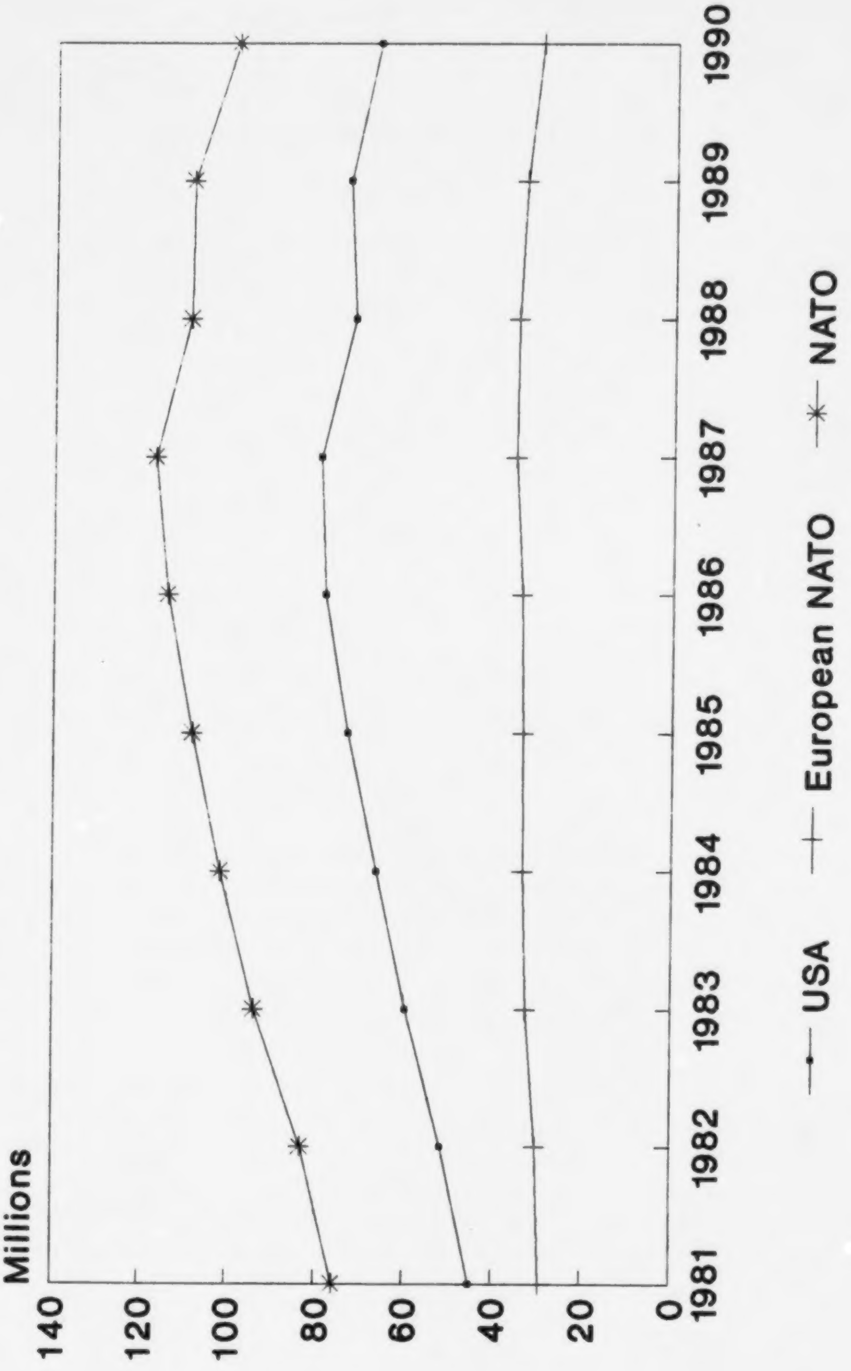
[6] Figures from Stockholm International Peace Research Institute, *SIPRI Yearbook, 1991* (New York and Oxford, Oxford University Press, 1991), p. 132.

Figure VI.1 NATO procurement, 1981-1990
(Constant 1988 United States dollars)



Source: **SIPRI YEARBOOK 1991** (New York and Oxford, Oxford University Press, 1991)

The emphasis on procurement reflected the fact that the industrial countries were drawing on their comparative advantage in high technology as against manpower and attempting to build up military forces that would be able to stop a mass conventional attack, especially by tank forces, in Europe. Another reason for the concentration on procurement was the direction of population trends, which constrained the pool of labour available for the armed services. Table VI.2 shows the rate of increase in population of the industrialized countries. In all regions, this slowed down markedly between 1950-1955 and 1985-1990, whereas for the world as a whole, there was relatively little change.

Table VI.2. Population growth rates in the developed market economies, 1950-2005

(Percentage)

Country group	1950-1955	1985-1990	2000-2005
Northern Europe	0.37	0.25	0.14
Southern Europe	0.84	0.24	0.16
Western Europe	0.83	0.24	0.03
Australia-New Zealand	2.33	1.28	0.89
Japan	1.43	0.43	0.31
Northern America	1.80	0.82	0.55
Eastern Europe	1.02	0.27	0.30
Soviet Union	1.71	0.78	0.61
World	1.79	1.74	1.47

Source: *World Population Prospects, 1990* (United Nations publication, Sales No. E.91.XIII.4).

The result of this slow-down was that the age-bracket of those aged between 17 and 30, the potential pool for military manpower, fell. In the case of NATO, this pool reached a peak in the mid 1980s.[7] One implication drawn at that time was that "most countries may be forced to recruit women to fill a greater proportion of their military forces support echelons".[8]

Women did assume a greater importance in the armed forces of several countries, although this may have been more a reflection of general social change. Between 1979 and 1991, the percentage of women in the total active armed services of Canada, the United Kingdom and the United States increased from 5.6, 4.7 and 6.6 per cent, respectively, to 10.9, 6.0 and 11.0 per cent, respectively.

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[7] See International Institute for Strategic Studies, *The Military Balance, 1983-1984* (London, 1983), pp. 145-146.

[8] Ibid., p. 145.

In spite of recruitment efforts, population trends could have been expected to put pressure on the military wage bill, especially if the supply elasticity of military personnel with respect to military wages was low, as appears to be the case, at least from the experience of the United Kingdom.[9] Increasing levels of conscription was not a favoured option. In many industrial countries, conscription had been abandoned by 1980, and both the number of conscripts and their length of service were generally smaller by the end of the decade.

The composition of military spending

The effect of these influences on military expenditure was reflected in its composition. Table VI.3 shows the composition of the military budgets of a group of developed market economies as reported in the United Nations standardized reporting instrument. At its inception relatively few countries replied to the Secretary-General's request to use this instrument, and so a comparison is possible between only a limited number of countries. The table gives figures for the industrial countries that replied when the reporting instrument was instituted.

In almost all of these countries, the percentage of military expenditure accounted for by procurement increased from 20 per cent to nearly 30 per cent in the course of the decade. The exceptions were Austria and Sweden, the two neutral countries in the group, and Belgium and Italy. The share of United States expenditure accounted for by procurement rose by 50 per cent in the course of the decade. As could be expected, with the volume and quality of equipment increasing over time, the share of the budget going to operations and maintenance also rose in many countries.

Military research and development is a small percentage of military expenditure in all except the major weapons producers shown in the table: France, Germany and the United States. The large share of research and development in the total for France reflects the independent development of its nuclear capability. Similarly, Sweden's military research and development absorbs a relatively large percentage of its expenditure because its policy of armed neutrality has entailed the development of its own military production.

The large category of military expenditure whose importance tended to decline as emphasis was placed on military procurement was expenditure on personnel. In the case of the United States, in particular, this fell from nearly 50 per cent of total military expenditure to 35 per cent in the course of the decade. However, in all countries expenditure on personnel remained the largest single item in the military budget.

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[9] See Michael Ridge and Ron Smith, "UK military manpower and substitutability", *Defence Economics*, vol. 2, No. 4 (1991), pp. 291-292.

Table VI.3. Comparison of major categories of defence spending 1978-1990

(Percentage)

		Personnel	Operations and maintenance	Total	Procurement	Construction	Total	Research and development	Total
1979	Australia	50.4	26.2	76.6	16.7	3.6	20.3	3.1	100.0
1989/90	Australia	40.9	27.6	68.5	21.6	7.6	29.1	2.4	100.0
1979	Austria	47.9	20.2	68.1	23.6	8.3	31.8	0.1	100.0
1990	Austria	56.3	17.8	74.0	20.1	5.9	26.0	0.0	100.0
1978	Belgium	55.4	19.5	74.9	18.7	6.4	25.1	0.0	100.0
1987	Belgium	55.3	23.6	78.9	17.9	3.2	21.0	0.0	100.0
1978/79	Canada	55.1	28.7	83.8	12.9	2.5	15.4	0.8	100.0
1989/90	Canada	46.9	29.8	76.7	19.0	2.9	21.9	1.4	100.0
1980	France	36.8	27.1	63.9	18.8	4.3	23.1	13.0	100.0
1990	France	32.5	20.8	53.2	25.8	4.8	30.5	16.2	100.0
1978	Germany	41.4	28.2	69.6	19.0	7.0	26.0	4.4	100.0
1989	Germany	44.7	24.5	69.3	20.2	5.1	25.3	5.4	100.0
1980	Italy	49.0	23.9	72.9	24.0	1.8	25.8	1.3	100.0
1990	Italy	47.9	25.8	73.7	20.7	3.1	23.8	2.6	100.0
1978	Netherlands	56.7	19.4	76.1	19.6	3.4	23.0	0.9	100.0
1989	Netherlands	48.7	26.5	75.2	20.6	4.0	24.6	0.2	100.0
1978/79	New Zealand	59.4	29.3	88.7	7.4	3.1	10.5	0.8	100.0
1989/90	New Zealand	38.3	29.2	67.4	17.1	15.5	32.6	0.0	100.0
1978	Norway	45.7	27.4	73.1	21.0	5.1	26.1	0.8	100.0
1990	Norway	36.4	28.5	65.0	24.4	10.6	35.0	0.0	100.0
1978/79	Sweden	40.4	19.2	59.6	29.3	5.6	34.8	5.6	100.0
1989/90	Sweden	34.9	24.3	59.2	26.0	3.0	29.1	11.8	100.0
1977/78	United States	49.0	20.5	69.5	20.3	1.8	22.1	8.4	100.0
1988/89	United States	35.3	21.7	56.9	29.6	1.8	31.4	11.6	100.0

Source: Department of Economic and Social Development of the United Nations Secretariat, based on *Reduction of Military Budgets: Military Expenditures* in standardized form reported by States, various years (United Nations publication).

Effects of reductions in military expenditure on its components

An immediate effect of diminished tensions has been the scaling-down of the desired size of armed forces. The largest army in the world, that of the Soviet Union, numbered about 3.4 million before the establishment of the Commonwealth of Independent States. With the members of the latter ceasing to be perceived as a potential military threat to the NATO countries, the need for NATO to have such large numbers of armed forces in Europe has diminished. Plans have already been made to reduce the size of armed forces. A reduction in the United States from 2 million in 1991 to 1.6 million persons is foreseen by 1995. In July 1990, the United Kingdom announced plans to cut its armed forces from 312,000 to 255,000, with the forces in Germany being halved from 55,000 to 20,000-25,000.[10] The German armed forces are to be reduced to 370,000 as against a combined total of the forces of the Federal Republic and the former German Democratic Republic of 607,000 in 1990. As the number of the armed services falls, the number of civilian employees of the armed forces will also fall. A reduction in the desired number of active service personnel will put a downward pressure on the service wage bill, as there will be less reason to raise service remuneration to attract recruits.

The decline in procurement can be expected to continue through the 1990s. With smaller armed forces, much military equipment will be added to inventory or scrapped. These cuts can be expected to exceed those that would be dictated by the Conventional Forces in Europe agreement once it enters into force.[11] Furthermore, with the cold war over, weapon systems that were being planned to meet the Soviet threat are coming under increasing scrutiny and orders are being scaled back or cancelled. This applies not just to nuclear missiles and strategic bombers, but also to conventional weapons.

The growing sophistication of new equipment, even if purchased in smaller quantities than before, exerts an upward pressure on the operations and maintenance item in military budgets. Training and equipment purchases will also be directed towards responding to a greater variety of challenges than in the past, when the military threat posed by the Soviet Union dominated military thinking and planning. In this connection it may be noted that, apart from the United States, only two developed countries, France and the United Kingdom, deployed land, air and sea forces in the Persian Gulf. The United States deployed 2,000 tanks, the United Kingdom 177 and France 40.[12] This disparity is partly accounted for by the much larger size of the United States armed forces, but it also revealed the difficulty that other countries had in sending armed forces for action outside Europe.

Military research and development in the United States, which accounts for the bulk of such spending, expanded more rapidly in the course of the 1980s than did overall military spending. After 1987, it stabilized in real terms.[13] Military research expenditure can be expected to fall in the future. However, the United States can also be expected to maintain a defence industrial base and to remain in the forefront of military technology. It has been suggested that the focus of the Pentagon be shifted from building weapons to an approach revolving around laboratory research and only limited production, with full-scale production starting when the need arose.[14]

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[10] *The Economist*, 28 July 1990, p. 47.

[11] The Conventional Forces in Europe Treaty was signed (but not ratified) in November 1990, by which time it was clear that "NATO forces would be reduced to levels far below the maximum allowed by the Treaty" (International Institute for Strategic Studies, *The Military Balance, 1991-1992* (London, Brassey's, 1991), p. 229).

[12] International Institute for Strategic Studies, *The Military Balance, 1991-1992...*, pp. 238-239.

[13] *SIPRI Yearbook, 1991...*, p. 125.

[14] *The New York Times*, 24 January 1992 and 22 February 1992. Some military contractors have argued that without actually producing the weapons that were designed, they would lose the ability to do so, and that it would be almost impossible to start production from scratch.

A research programme that has generated much controversy is the United States Strategic Defense Initiative.[15] It has been proposed to increase spending on this programme from $4.1 billion in 1991/92 to $5.4 billion in 1992/93. Much could depend on discussions between the Russian Federation and the United States on the possibilities of establishing a joint ballistic missile early warning centre and sharing anti-missile technologies.

The public debate over defence expenditure

Decisions on levels of military spending and force levels are matters of public debate. The present public debate about the military is probably more searching than that which took place at other times when military spending was winding down; for instance, after the Korean and Viet Nam wars in the case of the United States, or after the decisions by former colonial powers to accede to demands for independence. Even after these events, the principal military threat that they perceived remained - the vast conventional forces, supported by nuclear forces, of the Soviet Union.

At the present time, this military posture has to be rethought, bearing in mind the commitment of forces to United Nations operations and the formation of regional intervention forces. NATO has decided to form a Rapid Reaction Corps made up of four divisions and available for deployment to any part of NATO.[16] However, a common European defence policy raises many issues, especially concerning the relationship with NATO, that could take some time to resolve.[17]

The outcome of defence reassessments in countries that are not directly involved in NATO or the European theatre is difficult to assess. This applies with particular force to Japan, whose military spending is comparatively small - 1 per cent of gross national product (GNP). Japan has in recent years modernized its forces by increasing its procurement expenditure.

Governments have made estimates of the future size of their military establishments and of their anticipated military spending. However, it is probable that these plans will be revised in the next few years. The likelihood is that such revisions will be downwards rather than upwards. In the case of the United States, estimates of future defence spending have been revised downwards in recent years. Even the proposed revisions have been seen by some as inadequate.[18]

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[15] The controversy has not just been over the feasibility of the programme, but also over the way it has been managed. *The New York Times*, 9 March 1992, published allegations of corruption in the programme, which were followed by Congressional calls for an investigation.

[16] International Institute for Strategic Studies, *The Military Balance, 1991-1992...*, p. 231.

[17] See *The Economist*, 2 November 1991, for a description of some of the various suggestions.

[18] For instance, whereas the Administration has proposed that the military budget in 1997 should be $291 billion, entailing a savings of $43 billion between 1993 and 1997, the Chairman of the House Armed Services Committee proposed four different options designed to face different configurations of threats. The outcomes for 1997 were expenditures of $231, $246, $270 and $295 billion. The Chairman argued in favour of spelling out the options since the taxpayers were buying defence "for dealing with certain potential contingencies or threats, and they don't want to spend more than is necessary" (*The New York Times*, 23 February 1992).

The military sector in different countries

Table VI.4 shows the relative orders of magnitude of military expenditure in the developed market economies in 1989, as given by the United States Government. Figures for the Soviet Union are also given for the sake of comparison. Countries have been ranked according to their military expenditure. In 1989, the United States devoted 5.8 per cent of its GNP to military expenditure - a larger percentage than any other industrialized country except Greece. Of the seven major economies, only two, France and the United Kingdom, devoted more than 3 per cent of their GNP to defence. For almost all other countries, less than 3 per cent of GNP was devoted to defence. Germany and Japan devoted 2.8 per cent and 1 per cent, respectively, of their GNP to defence. The military expenditure of the United States was about 50 per cent greater than that of all the other industrialized countries combined, but the size of its armed forces was only about two thirds of those of the other countries. The armed forces of several other countries account for a larger percentage of the population than in the case of the United States, but in these countries reliance was placed upon conscripts. Countries without conscription, such as Canada, Japan and the United Kingdom, had smaller armed forces in relation to the population.

The United States exported more arms than did all the other developed market economies combined, and its exports of arms were a larger percentage of total exports than in the case of any other country. Imports of arms constituted a small percentage of imports in all the developed market economies except Greece.[19] In general, the figures for imports and exports of arms changed much more year by year than did those for military expenditure or the size of the armed services. Furthermore, different sources give different relative orders of magnitude for arms transfers.[20]

These statistics show that in the military sector the United States is more dominant than in other sectors, such as total world trade. Therefore, changes in military spending in the United States dwarf the effects of such possible changes elsewhere. A reduction in military expenditure to 3.5 per cent of United States GNP by 1997, which is envisaged by some scenarios,[21] means a reduction by 2 percentage points of United States GNP over six years, which would be significant if the slow annual growth in output experienced recently were not to pick up. For the sake of comparison, in the case of Japan, a similar reduction in defence spending (which is not envisaged at the present time), would reduce Japanese defence spending by 0.4 percentage points of Japanese GNP, which could be compared to the growth of Japanese GNP of 5.6 and 3.4 per cent in 1990 and 1991, respectively.

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[19] However, in 1989, Greece's imports of arms were considerably larger than in other years.

[20] The other principal source of information for arms transfers is SIPRI, which gives figures for exports of "major weapons" in constant prices.

[21] See *Business Week*, 24 February 1992.

Table VI.4. The military burden in the developed market economies, 1989

Country	Military expenditure (millions of dollars)	Military expenditure as percentage of GNP	Military forces (thousands)	Military forces per thousand of population	Arms imports (millions of dollars)	Arms exports (millions of dollars)	Arms as percentage of total imports	Arms as percentage of total exports
United States	304 100	5.8	2 241	9.0	1 600	11 200	0.3	3.1
France	35 260	3.7	554	9.9	210	2 700	0.1	1.5
United Kingdom	34 630	4.2	318	5.6	650	3 000	0.3	2.0
Germany	33 600	2.8	503	8.1	875	1 200	0.3	0.4
Japan	28 410	1.0	247	2.0	1 400	110	0.7	0.0
Italy	20 720	2.4	533	9.3	300	60	0.2	0.0
Canada	10 840	2.0	88	3.4	190	410	0.2	0.3
Spain	7 775	2.1	277	7.1	750	130	1.0	0.3
Netherlands	6 399	2.9	106	7.1	480	140	0.5	0.1
Australia	6 153	2.3	70	4.2	675	80	1.5	0.2
Sweden	4 872	2.6	62	7.4	70	575	0.1	1.1
Belgium	3 881	2.5	110	11.1	220	20	0.2	0.0
Switzerland	3 806	2.1	17	2.5	300	60	0.5	0.1
South Africa	3 786	4.4	100	2.6	100	0	0.5	0.0
Greece	3 097	5.9	201	20.1	2 000	0	12.4	0.0
Norway	2 925	3.3	43	10.2	340	30	1.4	0.1
Denmark	2 184	2.2	31	6.0	110	20	0.4	0.1
Finland	1 788	1.6	39	7.9	20	0	0.1	0.0
Portugal	1 457	3.3	104	10.1	60	40	0.3	0.3
Austria	1 402	1.1	48	6.3	100	40	0.3	0.1
New Zealand	847	2.2	12	3.8	50	0	0.6	0.0
Ireland	449	1.6	13	3.7	5	0	0.0	0.0
Luxembourg	76	0.9	1	2.6	10	5	..	..
Non-United States	214 357		3 477		8 915	8 620		
USSR	311 000	11.7	3 700	12.8	900	19 600	0.8	17.9

Source: United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers, 1990* (Washington, D.C., 1991).

Historical experience of disarmament

In some situations in the past, it has been claimed that military spending has had a favourable impact on economic conditions and stimulated economic growth, notably when alternative ways of creating employment seemed beyond reach. Recent empirical work testing the connection between economic growth and defence spending has also often produced conflicting results.[22]

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[22] For instance, in a recent issue of `Defence Economics` (vol. 2, No. 1 (1990)), three articles analysed the relationship between defence spending and economic growth. H. Sonmetz Atsesoglu and Michael J. Mueller, in "Defence spending and economic growth", concluded that "a larger defence spending leads to a higher economic growth, and vice versa" (p. 26). They calculated that the loss of output coming from a 10 per cent annual reduction in defence spending from 1990 to 1995 would constitute 2.8 per cent of real output in 1995 (p. 25).

Chi Huang and Alex Mintz, in "Ridge regression analysis of the defence-growth tradeoff in the United States", found that "the results showed no significant, direct tradeoff between defence spending and economic

However, there are few historical parallels to the nature of the decrease in military expenditure that is now anticipated, notably in the United States. In view of the dominant size of United States military spending and the great attention given to the consequences of cuts in military spending, much of the following review will concern effects in that country.

At the end of the Second World War, military expenditure decreased rapidly in the United States from over 40 per cent of GNP in 1944 to 7 per cent in 1947. However, the rapid build-up of military expenditure during the war years was considered at the time to be a temporary phenomenon. Civilian employees were often put to work making military products, but using their existing skills, as in the welding together of Liberty ships by civilian welders. With the end of the war, there was no question but that civilian workers would resume their civilian occupations. Similarly, the United States had mobilized a large conscript army, which was rapidly demobilized at the end of the War. The pent-up demand for goods and services, which resulted not just from the war years but also from the Depression years of the 1930s, helped keep employment high in the transition to a peace economy and provided demand that enabled firms to reconvert to their original lines of production quickly.[23]

The Second World War also ended in the way that the victors had hoped for and, quite early on in the course of the struggle, had anticipated - with the military defeat and surrender of the opposing forces. At the end of the War, there was little or no support for the maintenance of high military expenditures or sizable armed services. However, it was soon discovered that the pre-war world could not be reconstituted. The European colonial powers had to adjust to withdrawal from their empires. The United States was also profoundly affected by the War, in particular by the development of new weapons - the long-range bomber, the jet fighter, the V-1 flying bomb, the V-2 rocket and the atomic bomb. It could no longer rely on its continental isolation for immunity to any hostile attack. At the same time, it had assumed a role of international leadership.

After the Soviet Union developed the atomic bomb in 1949, the United States felt that it could not depend on its possession of atomic weapons to deter any possible aggression, but considered it necessary to foster the creation of a defence industrial base

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growth" (p. 36).

Finally, W. Robert J. Alexander, in "The impact of defence spending on economic growth: a multi-sectoral approach to defence spending and economic growth with evidence from developed countries", concluded that "we are unable to reject the hypothesis that defence spending has no significant impact on economic growth for a group of developed countries. We are able, though, to point out the relatively low productivity of the defence sector. Even if we are unable to discount the possibility of a positive "spin-off" from spending on defence, resources are more productively employed in another sector from which the spin-off may be just as high or higher".

[23] For an analysis of how the post-war change-over in American industry was a "reconversion" rather than a "conversion", see Kenneth L. Adelman and Norman R. Augustine, "Defense conversion", *Foreign Affairs*, vol. 71, No. 2 (1992).

which would produce weapons superior to those possessed by the Soviet Union. The defence industry remained in private hands and expanded with the progress of the cold war.

The magnitude and nature of the perceived threat of the cold war to national survival thus brought about the creation of a powerful "military industrial complex" in the United States in a way that the Second World War had not.[24] Much of the discussion in the United States concerns what kind of defence industrial base the country needs now that the Soviet threat has been removed. It is widely accepted that the country should retain a defence industrial base that would enable it to produce the most technologically advanced weaponry.[25]

The defence industry in the industrialized countries

In 1989, of the 100 largest arms producing companies in the industrialized countries in terms of sales, 47 were domiciled in the United States and their total sales were $106.2 billion.[26] A total of 42 companies were domiciled in Western Europe and had sales of $52.5 billion. Of these, the United Kingdom accounted for 14 companies with sales of $17.2 billion, France for 9 companies with sales of $16.3 billion and Germany for 7 companies with sales of $7.6 billion. Japan had 6 of the 100 largest arms-producing companies, whose total sales were $6.2 billion. The developing countries had 5 companies with total sales of $3.7 billion.

Arms sales do not account for all of the output of the arms-producing companies. Table VI.5 gives figures for the 10 largest arms-producing companies, ranked by their sales in 1989. There was a considerable difference in their reliance on arms sales. Northrop, the California-based aircraft producer, derived about half of its revenue from the B-2 bomber programme. As early as 1989, it foresaw cut-backs in the B-2 programme and began to institute layoffs.[27] In January 1992, the Administration announced that it would shut down production of the bomber after 20 had been produced. Northrop was the only one of the 10 largest companies to post a loss in 1989. On the other hand, the largest of the 10 in terms of total sales and employment, the automobile giant, General Motors, derived only 4 per cent of its sales from arms. What an individual company supplies is sometimes as much a determinant of its vulnerability to defence cuts as the percentage of sales accounted for by arms. General Dynamics, for instance, is a diversified weapons producer, making missiles and electronics, for which the market held up better in 1989 than for military aircraft; it showed a profit in 1989. Lockheed, on the other hand, barely made a profit on a similar volume of sales.

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[24] Two countries which had built up a military-industrial complex before the War were Germany and Japan, but their large defence industries were dismantled and destroyed after the War (see Lutz Köllner, "The national experience of the Federal Republic of Germany", in *Conversion: Economic Adjustments in an Era of Arms Reduction*, vol. II, Disarmament Topical Papers, No. 5 (United Nations publication, Sales No. E.91.IX.7) and Isamu Miyazaki, "Conversion from military to civilian industry", in *Challenges to Multilateral Disarmament in the Post-Cold-War and Post-Gulf-War Period*, Disarmament Topical Papers, No. 6 (United Nations publication, Sales No. E.91.IX.18)). The example of Germany, which surely also applies to Japan, was that "the Germans surrendered neither their know-how nor their propensity to work hard and succeeded in compensating for the military defeat in the great economic upswing that was to follow" (Köllner, loc. cit., p. 151).

[25] For a discussion of the concept of the defence industrial base, see Jonathan Ratner and Celia Thomas, "The defence industrial base and foreign supply of defence goods", *Defence Economics*, vol. 2, No. 1 (1990), pp. 57-68. The authors point out how the National Defense Authorization Act, Fiscal Year 1989, directed the Secretary of Defense to formulate plans to strengthen the United States defence industrial base.

[26] All figures in this paragraph are from *SIPRI Yearbook, 1991...*, p. 286.

[27] Betty G. Lall and John Tepper Marlin, *Building a Peace Economy* (Boulder, Colorado, Westview Press, 1991), p. 14.

Table VI.5. The largest arms-producing companies among the market economies

Rank	Name	Country	Arms sales in 1989	Total sales in 1989	Arms as percentage of total sales	Profit (millions of dollars)	Employment in 1989
1	McDonnell Douglas	United States	8 500	14 581	58.3	219	128 000
2	General Dynamics	United States	8 400	10 053	83.6	293	103 000
3	Lockheed	United States	7 350	9 932	74.0	2	82 500
4	British Aerospace	United Kingdom	6 300	14 898	42.3	546	125 000
5	General Electric	United States	6 250	54 574	11.5	3 939	292 000
6	General Motors	United States	5 500	126 932	4.3	4 224	775 000
7	Raytheon	United States	5 330	8 796	60.6	5 29	77 600
8	Boeing	United States	4 800	20 276	23.7	9 73	164 500
9	Northrop	United States	4 700	5 248	89.6	-81	41 000
10	Rockwell International	United States	4 500	12 633	35.6	735	109 000

Source: *SIPRI Yearbook, 1991* (New York and Oxford, Oxford University Press, 1991), p. 311

The industrial effects of the transition to lower military spending

With cancellations in arms purchases, the major companies are resorting to layoffs. Estimates of those who will eventually be affected vary. A study group found that Federal cuts in military spending could result in the loss of between 210,000 to 420,000 jobs in Los Angeles County by 1995 as military spending there falls from $8.88 billion in 1990 to between $3.5 and $4.9 billion.[28] This county received more Federal military dollars than any other in the United States, and in December 1991 had 225,600 workers directly employed in the aerospace industry, accounting for 5.3 per cent of non-farm employment and 28.3 per cent of manufacturing jobs. Besides the prime contractors, the subcontractors and suppliers would also be affected.

To assess the net effects on employment of changes in military spending, two factors have to be taken into consideration - the rate at which new jobs are being created in a region, and the transferability of displaced workers to non-defence activities. A disaggregated analysis for the United States attempted to calculate the effects of cumulative reductions in military expenditure between 1990 and 1995.[29] Some of the results are given in table VI.6. In 1988, there were 1,337,900 active duty service personnel in the United States and 936,900 civilians working for the Department of Defense. These are known magnitudes. An estimate for the number of employees in defence-related industries was 3.4 million, equivalent to 3 per cent of total employment. A 3 per cent annual cut in military spending would result in an annual loss of 102,000 jobs in the private sector and a 6 per cent annual cut in an annual loss of 204,000 jobs.[30] However, between 1988 and 1989 total annual employment in the United States economy grew by 2.3 million, meaning that 11 and 22 times as many jobs were generated as would have been lost by a 6 per cent and 3 per cent annual cut in defence spending, respectively.

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[28] Estimate by the Los Angeles Aerospace Task Force reported in *The New York Times*, 18 March 1992.

Table VI.6. Estimates of potential defence-related employment losses in the United States under different scenarios

Active duty personnel in 1988	1 338 000
Civilian Department of Defense in 1988	937 000
Private sector in 1988	3 400 000
Total defence-related employment in 1988	5 675 000
Total employment in 1988	115 049 000
Private sector defence employment as a percentage of total employment	3.0
Private sector workers potentially displaced by a 3 per cent cut in defence spending	102 000
Private sector employees potentially displaced by a 6 per cent cut in defence spending	204 000
Gains in annual total employment in 1988-1989	2 325 000
Ratio between gain in total employment and losses in defence related employment:	
for a 3 per cent defence cut	22.8:1
for a 6 per cent defence cut	11.4:1

Source: David D. Whitehead, "FYI: the impact of private-sector defense cuts on regions in the United States", *Federal Reserve Bank of Atlanta Economic Review*, March/April 1991.

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[29] David D. Whitehead, "FYI: The impact of private-sector defense cuts on regions in the United States", *Federal Reserve of Atlanta Economic Review*, March/April 1991, pp. 30-41.

[30] Another estimate for the United States as a whole was that over the next six years, 1.3 million people would lose jobs in the defence industry and the military services (Professor Seymour Melman, Chairman of the National Commission for Economic Conversion and Disarmament, writing in *The New York Times*, 27 February 1992).

In the north-east of the United States, potential absorption rates[31] tended to be lower as employment growth was small and the number of potentially displaced defence employees high. California, on the other hand, saw the greatest absolute loss in defence-related employment, but had the largest absolute change in employment and so its absorption rate was near the national average.

A study for the United Kingdom and for the countries members of the Organisation for Economic Co-operation and Development (OECD) came to a similar conclusion: the share of military expenditure is not a significant influence on the unemployment rate, except in the case of major wars, when aggregate demand and employment rise rapidly.[32]

Such calculations can show that if the economy is performing well, as in the OECD countries in the late 1980s, the absorption of defence-sector workers should proceed in a reasonable manner. Between 1980 and 1989, the number of employees on non-farm payrolls in the United States expanded from 90.4 to 108.4 million - by about 2 million persons a year. An annual loss of just over 200,000 jobs from a 6 per cent cut in military expenditure is small in comparison. However, with the recession, total employment fell by about a million between the end of 1990 and the end of 1991.[33] To exacerbate matters, about half of the 3.14 million workers in private sector defence-related employment in 1988, or 1.55 million people, were in the manufacturing sector.[34] This sector is small and was already shrinking before the recession: it fell from 20.3 million employees in 1980 to 19.4 million in 1989. With the recession, the sector shrank even more rapidly - to 18.4 million employees at the end of 1991. In these circumstances, the loss of jobs from, say, a 6 per cent cut in defence expenditure begins to appear large.

Job losses in the defence industry can be particularly severe for a particular community, as the figures for Los Angeles County indicate. At a time of recession they are doubly severe. One estimate was that defence cut-backs in the United States were responsible for about 25 per cent of lost jobs and industrial production between July 1990 and February 1992.[35]

Salaries in the defence industry tended to be higher than those in other industries, not only for scientists, engineers and other professionals but also for production workers.[36]

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[31] The absorption rate can be defined as the ratio between the new jobs being created elsewhere in the economy and the losses of jobs in the defence industry.

[32] Paul Dunne and Ron Smith, "Military expenditure and unemployment in the OECD", *Defence Economics*, vol. 1, No. 1 (1990), pp. 70-71.

[33] Figures from United States Department of Labor, Bureau of Labor Statistics, *Employment and Earnings* (Washington, D.C.), various issues.

[34] Norman C. Saunders, "Defence spending in the 1990's - the effect of deeper cuts", *Monthly Labor Review* (United States Department of Labor, Bureau of Labor Statistics, Washington D.C., October 1990), p. 4. The conclusion of this study was that "although the effects [of reductions in defence spending] tend to be relatively minor at the aggregate level, they may be significant in certain industries and occupations most closely tied to the Department of Defense. While other industries and occupations may suffer from significant defense cutbacks, other industries and occupations may improve as a result of offsetting economic factors" (p. 15).

[35] *Business Week*, 24 February 1992.

[36] Liba Paukert and Peter Richards, "Employment impact of industrial conversion: a comparative analysis",

Even if defence workers are able to find new employment, they might have to accept a cut in salary.

As illustrated by the decline in jobs in the manufacturing sector in the United States in the 1980s, at a time when total employment increased, the economy is constantly changing, with some jobs being lost to be replaced by others. The potential job availabilities for discharged defence-related workers will also depend on government action in the wake of defence cuts. Government could decide to do nothing when defence expenditure declines, or it could offset the decreases in various ways: by increasing its own purchases of civilian goods and services, by cutting personal taxes by the amounts of the reductions, by increasing transfer payments or grants to states and local government. These different policies would lead to different results for key macroeconomic variables such as interest rates, the budget deficit, the inflation rate, real disposable income and productivity. They would also lead to different demands for labour: for instance, if taxes were cut and consumer demand rose, employment would be likely to increase for the manufacture of consumer goods. On the other hand, if grants were given to states and local authorities, they would tend to employ more teachers, court officials and highway maintenance workers.[37]

Besides laying off workers and shutting down production facilities, another strategy that defence companies are adopting to cut costs and become more competitive is to merge with other national producers or to cooperate with companies in other countries. Companies in the United States have tended to merge with other United States companies, while in Europe, where the arms sales of individual companies tend to be smaller, joint companies are being formed by the main producers of engines, military electronics, missiles and helicopters.[38]

Military revenue has helped some companies compete in international markets. Furthermore, lessons learned from military production have been applied to similar civilian products, particularly in the aircraft industry.[39] With the prospective decline in military orders, manufacturers will have to ensure that their civilian production is profitable. This is doubly important now that the market for commercial aircraft is depressed - in 1991, orders for new commercial jets were $32 billion, compared with a peak of $90 billion in 1989.[40]

In November 1991, McDonnell Douglas reached a preliminary agreement to sell the Taiwan Aerospace Corporation 40 per cent of its commercial aircraft division for $20 billion. It required the funds to develop a new jetliner. This prospective infusion of funds into McDonnell Douglas is but one indication of how internationalized the large companies that

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in *Defence Expenditure...*, p. 212.

[37] Saunders, op. cit., p. 12.

[38] *SIPRI Yearbook, 1991...*, pp. 287-291.

[39] For instance, the Boeing 707 jetliner was derived in part from the KC-135 tanker produced for the United States Air Force (*The New York Times*, 15 March 1992).

[40] *The Economist*, 7 March 1992.

are arms producers are becoming. The Boeing Company will use three Japanese companies as subcontractors for its next large commercial jet.[41] In military applications, supplies are also purchased from other countries, in particular Japan, which is pre-eminent in many technologies required for military applications. Japan supplies about 50 per cent of the world's semiconductors and it alone can supply the semiconductors used in some weapon systems.[42]

The use of Japanese technology in United States weapon systems has highlighted the fact that military technology is no longer setting the pace for civilian technology, as was frequently the case earlier. Rather, the reverse appears to be true, with the military trying to adapt for their purposes technologies developed for civilian uses. Military specifications for some products in electronics tend to be less demanding now than are specifications for civilian products, again the reverse of earlier experience.

These developments suggest that a switch of resources from military to civilian research would not depress the long-run technological advance of a society and thereby harm its competitiveness and potential economic growth. However, there is not a limited pool of scientific talent which is either employed in defence or civilian research: changes in military and civilian research and development can often move in the same direction.[43] At the present time, after reaching a peak in 1989, it appears that both private and government research and development spending in the United States are falling as a result of the recession and the military cutbacks.[44] Moreover, the pool of scientific talent itself grows as a result of government policies: defence needs can lead to increases in universities' output of scientists. Migration and the greater entry of women into the scientific field also contribute to the supply of research scientists.

It is sometimes argued that military production was not sufficiently competitive to prepare companies for civilian production. Cost considerations were secondary to performance considerations, and defence ministries were less demanding customers than private consumers were. Within the military establishment, it was generally accepted that military personnel would be trained at great cost to operate technologically advanced equipment, whereas the emphasis in civilian markets is on making equipment "user friendly". An element of competition was introduced by having companies compete for defence contracts and by the existence of competitors in export markets, but this was not thought to be as intense as competition in civilian markets.

Some companies have made the transition from military to civilian production successfully, with overall sales expanding and civilian sales taking up a greater percentage of total sales. Others have failed to diversify into a new line of business.[45] The case for using public monies to assist in conversion attempts has been resisted because of general scepticism about government intervention in industry.[46] Decisions on conversion will, then, ultimately be taken by private businesses, which will have the responsibility for success or failure.[47]

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[41] *The New York Times*, 15 March 1992.

[42] See Professor Hajime Karatsu, "Weapons running on Japanese technology keep increasing in an era when technology for the public has priority", *Shukan Toyo Keizai* (Tokyo), 3 March 1991, translated in United States Government Foreign Broadcast Information Service *Daily Report, Supplement: East Asia - Japan - Defense Related Issues*, 13 May 1991.

[43] See Murray Weidenbaum, "Defence spending and the American economy: how much change in the offing", *Defence Economics*, vol. 1, No. 3 (1990), pp. 236-237.

[44] *The New York Times*, 21 February 1992.

The strategy of the United States Government is to leave matters in the hands of the companies themselves. The basic philosophy is that the Government should not intervene to steer companies towards new areas of production or to subsidize the transition: it should, in fact, treat defence companies just like other companies that are facing a loss in demand. Some special steps have been taken, however. The Defense Economic Adjustment Diversification, Conversion and Stabilization Act of 1990 provided $200 million in funding for community and worker-centred adjustment assistance. Of this amount, $150 million is to be provided by the Department of Defense to the Job Training Partnership Act programmes of the Department of Labor and $50 million to the Department of Commerce's Economic Development Administration for disbursements as planning grants to communities adversely affected by defence cuts.[48]

Other laws passed in the United States reflect a concern over maintaining the technological benefits provided by the defence industry.[49] The National Defense Authorization Act for Fiscal Year 1992 (Public Law 102-90) included provisions to fund technology programmes, such as high definition display, through the Defense Advanced Research Projects Agency, and also increased funding for research and development of manufacturing technologies. The American Technology Preeminence Act of 1991 (Public Law 102-245) authorized funding for the Department of Commerce's programmes relating to technology and established two commissions, the National Commission on Reducing Capital Costs for Emerging Technology and the Commission on Technology and Procurement, to investigate and report on methods of promoting technology development in the United States and on the role of federal procurement policies in fostering and maintaining a technology base.

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[45] Adelman and Augustine, in "Defence conversion"..., concluded that "the reason for this solid record of failure [in conversion] is simple: defense work has little in common with civilian work"; they argued that detailed research had not identified a successful product in the United States economy which was developed through a military-to-civilian conversion (p. 27).

[46] See Murray Weidenbaum, loc. cit., p. 241.

[47] Experience suggests that the elements for successful diversification include "(1) planning for change before cuts; (2) thorough market research; (3) an understanding of cost minimization; (4) using the existing workforce; (5) technology transfer; (6) persistence in the face of a long-term payoff; and (7) committed leadership" (see *Economic Adjustment and Conversion*, report prepared by the Economic Adjustment Committee and the Office of Economic Adjustment, Department of Defense, Washington, D.C. 1985, cited in Lall and Marlin, op. cit., p. 21).

[48] For further details, see Defense Budget Project, *Issue Brief: Defense-related Economic Adjustment and Federal Policy* (Washington D.C., 24 February 1992) and Lall and Marlin, op. cit., pp. 16-17 and 79-81.

[49] For a review of legislation either proposed or passed in the United States Congress, see Defense Budget Project, *Review of Legislation in the 102nd Congress Relating to Economic Adjustment, the Defence Industrial Base and Technology Development* (Washington D.C., 25 February 1992).

The needs of military personnel have been given special attention. The National Defense Authorization Act for Fiscal Year 1992 also contained provisions for voluntary separation incentive and special separation benefit programmes for military personnel who leave the services early.

There have been criticisms that legislation has not gone far enough; in particular, that support was not given for small businesses used as subcontractors by the main arms-producing companies, and that unemployment compensation was not extended for a longer period.[50] A more radical criticism has been made that there is no plan for conversion to a civilian economy, and that legislation should mandate company-based advance planning for conversion.[51] The general view of the Administration is that the proposed defence budget changes "do not seem to call for new and extraordinary economic adjustment or conversion programmes...Public adjustment supports already available are broadly adequate for the portended changes".[52]

In the matter of putting to alternative uses military bases that are to be closed down, local governments have been largely successful in generating new employment opportunities. Most former military bases have been turned into industrial and office parks. Some have become educational establishments. From the records of 100 communities over a 25-year period to the mid-1980s, it was estimated that the loss of employment due to the base closings was 93,000, but that the new employment generated was 138,000.[53]

The cost of transition to a lower military establishment: the environment

During the 40 years of the cold war, particularly during the early years, there was relatively little appreciation of the hazards of nuclear power and of the environmental damage that was being caused. Now attention can be directed from producing nuclear weapons to cleaning up the environment. The environment was not polluted only by nuclear programmes and the leaking of radioactive wastes into the soil. Chemical byproducts were also disposed of in an unsafe fashion and unexploded shells were left on firing ranges.

The scale of the clean-up is likely to be very large, particularly in the United States, which had the largest military establishment and a large nuclear programme. By autumn 1991, the Pentagon had investigated 17,500 sites on 1,855 installations in the United States and found that 11,000 were likely to warrant future restoration work.[54] These estimates exclude environmental damage in installations outside the United States. In fiscal year 1993,

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[50] See Lall and Marlin, op. cit., p. 81.

[51] See Melmann, loc. cit., and Lall and Marlin, op. cit., p. 78. The "Defense Economic Adjustment Act", has been introduced by Representative Ted Weiss for many years without becoming law. Its key provision was that at every defence facility employing at least 100 persons an Alternative Use Committee composed of not less than eight members with equal representation of the facility's management and labour should be established.

[52] Robert M. Rauner, "The national experience of the United States", in *Conversion: Economic Adjustments in an Era of Arms Reduction*..., p. 100. Mr. Rauner is the Director of the Office of Economic Adjustment of the United States Department of Defense.

[53] See Lall and Marlin, op. cit., pp. 30-31.

[54] *The New York Times*, 5 August 1991.

$3.7 billion was earmarked in the defence budget for the clean-up of pollution on military bases. A further $5.5 billion was requested for cleaning up the pollution from the Department of Energy's nuclear weapon programmes. As the clean-up progresses, new technologies could be developed that would reduce costs; further evidence of pollution could also be produced. In these circumstances, estimates of the time scale and eventual total cost of the clean-up are necessarily subject to wide margins of error. One estimate for the total cost over 30 years of removing contamination from military bases and Energy Department sites was $400 billion.[55] This clean-up work could provide alternative sources of revenue for military contractors, although doubts have been expressed on whether such work could compensate for the cancellation of military production.[56]

The cost of weapon destruction

With the enhanced emphasis on environmental protection, weapon destruction is likely to be more costly than before.

In the 1960s, for instance, the primary method of disposing of United States chemical weapons and munitions was dumping at sea. In 1969, the National Academy of Sciences called for an environmentally sound method. In 1984, the United States formally adopted direct incineration as the preferred method of destroying its chemical stocks.[57] Its first full-scale destruction facility is the Johnston Atoll Chemical Disposal System (JACADS) in the Pacific. Eventually, the United States hopes to have a destruction facility at each of its nine chemical stockpile sites. As safety is the overriding concern in destruction, delays and rising costs can be expected. Between 1985 and 1988, the estimated cost of the United States chemical destruction programme doubled.[58] One recent estimate of the cost of destroying the United States chemical weapons, including verification costs, was over $6 billion.[59]

Similar considerations apply to the destruction of nuclear weapons, where environmental concerns and safety should be the first priorities. The size of the reduction depends on the final outcome of negotiations and unilateral steps. In 1991, before the START treaty was signed, it was estimated that the strategic forces of the Soviet Union and the United States had a total of 10,877 and 11,602 warheads, respectively. If implemented, it was calculated that the START treaty would have cut these to 6,940 and 8,592 warheads, respectively, by the late 1990s.[60] In his State of the Union address, President Bush proposed eliminating all the United States 10-warhead MX-missiles, converting all other land-based multiple-warhead missiles to single-warhead models and cutting by a third the number of sea-based ballistic missile warheads. Each side would thus have about 4,500 warheads deployed on long-range nuclear weapons. These proposals were accepted by the Russian Federation, which proposed even lower limits of about 2,500 warheads for each country.

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[55] *The New York Times*, 5 August 1991.

[56] *The Economist*, 25 January 1992.

[57] Stephen J. Ledogar, "Issues relating to the destruction of weapons, including environmental impact", in *Challenges to Multilateral Disarmament in the Post-Cold-War and Post-Gulf-War Period*, Disarmament Topical Papers, No. 8 (United Nations publication, Sales No. E.91.IX.18) pp. 276-277.

[58] *SIPRI Yearbook, 1991...*, p. 94.

[59] Hendrik Wagenmakers, "Future of monitoring and verification", in *Challenges to Multilateral Disarmament...*, p. 222.

[60] Figures given in *The New York Times*, 30 January 1992. Different figures are given in the International Institute for Strategic Studies, *The Military Balance, 1991-1992*, pp. 219-220. However, whereas the treaty limited each side to 6,000 START-countable warheads, this limit could be breached legally because "the counting rules set

Whatever the final results in terms of the number of warheads destroyed, a very considerable expense will have to be incurred by the developed market economies not only in destroying their own nuclear weapons, but also in assisting in the destruction of the nuclear weapons of the Commonwealth of Independent States. In 1991, the United States Congress voted to set aside $400 million to help the Commonwealth destroy its weapons of mass destruction. It is impossible to estimate the final cost of the destruction of nuclear weapons because of the lack of experience in this field.[61]

The platforms on which weapon systems are mounted, such as tanks, ships and aircraft, cannot easily be converted to civilian use: for instance, it is probably cheaper to buy a tractor or a fire engine than to convert the chassis of a tank to one, and cheaper to build a freighter than to use a decommissioned destroyer for cargo.[62] However, the environmental and safety factors in the destruction of conventional weapons are not so complicated as they are with chemical or nuclear weapons. The technology of cutting up equipment and melting down the scraps to recover the original metal is well known. The cost of labour seems the determining factor in the cost of destruction: it takes between 300 and 500 man-hours to cut up a tank whose scrap value would be about $4,000.[63]

The destruction of conventional equipment could not, then, be expected to place insuperable costs on the countries undertaking it. However, destruction is made necessary not only by the terms of arms reduction agreements,[64] but also to prevent the weapons being recommissioned or sold.

The cost of verification

The technology to verify arms reduction agreements is continually developing. Therefore, as with the destruction of nuclear weapons, it is difficult to begin to estimate the costs of verification. However, verification technologies could have important civilian

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artificial figures for warheads attributed to each delivery weapon which can in some cases be exceeded" (p. 216).

[61] Stephen Ledogar, "Issues relating to the destruction of weapons, including environmental impact", in *Challenges to Multilateral Disarmament...*, p. 286.

[62] Alan Shaw, "Problems arising from putting disarmament measures into effect", in *Challenges to Multilateral Disarmament...*, p. 266.

[63] Ledogar, op. cit., p. 282.

[64] Article VIII of the Treaty on Conventional Armed Forces in Europe mandates that reduction in armaments is to be achieved in ways which do not permit export: in the case of artillery, for instance, by "destruction or placement on static display, or, in the case of self-propelled artillery, by use as ground targets" (*SIPRI Yearbook, 1991...*, p. 468).

applications. For instance, French experiments with Thomson-CSF airborne radar used to detect submarine periscopes indicated that this system had the potential for locating tuna shoals more accurately.[65] In turn, this could render obsolete the practice of driftnet fishing for tuna, which has led to the netting and killing of dolphins. It is also possible to envisage the sharing and mutual development by different countries of verification technologies that would lead to a reduction in costs.

An overall assessment of the economic costs of moving to a lower military establishment

Environmental clean-up costs are being incurred because of a perceived necessity. The end of the cold war allowed attention to be directed to the environmental consequences of much military activity, but environmental clean-up could not have been indefinitely delayed, and further delays would only have added to total eventual costs.

The financial costs of these various operations reflect the volume of resources they consume. Capital and human resources are being employed in tasks which frequently have or could have a direct civilian application. This is the case with environmental clean-ups and verification techniques. The experience that enterprises obtain in these military-related activities could help prepare them for subsequent civilian operations: the short-term costs involved could lead to longer-term civilian benefits.

Similarly, recent research indicates that enterprises moving from military to civilian production often find that it is more economic to shut down existing production facilities and build new facilities for civilian production than to attempt to convert existing facilities to civilian production. The view that conversion would be a matter of mechanical re-engineering of facilities from military to civilian production was cast into doubt by the experience of the Soviet Union; the experience of the market economies confirms that such a short-term change-over is seldom realistic. If the longer term structural adjustment of economies towards a position where the military sector and military production are considerably smaller is successful, the benefits should certainly outweigh the costs of the transition.

Arms transfers

There is great concern about fuelling arms races in developing countries. This concern is not just about the transfer of surplus weapons to them, but about the possibility of defence-industry scientists from the former Warsaw Treaty Organization States finding employment in third countries which wish to develop their own weapons of mass destruction. The United States decided to appropriate $25 million to assist the Commonwealth of Independent States to establish an international science and technology centre that would support scientists of the Commonwealth in redirecting their talents to non-military endeavours. Western European countries were expected to help fund the centre.

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[65] Keith Hayward and Trevor Taylor, "Military hardware", in *Conversion: Economic Adjustments in an Era of Arms Reduction...*, p. 263.

The effects of the rejection of ideological confrontation by the Governments of the Commonwealth of Independent States and eastern Europe on the trade in arms are difficult to predict. Some exporters, such as Czechoslovakia, have stated their intention not to export arms to developing countries, but this is proving difficult to achieve. However, the dismantling of much of the former Soviet Union's weapons industry has meant that the Commonwealth's role in the arms trade will be considerably diminished, although there is the possibility that some excess Commonwealth supplies will find their way on to international markets.

The United States is the largest arms exporter, but it is also a large importer of arms and, as table VI.7 shows, during the period 1985-1989 was the largest recipient of arms transfers among the developed market economies.

The arms trade is dominated by political considerations, with countries often encouraging domestic production instead of making foreign purchases, or deliberately restricting their exports to certain countries or regions. This is also shown in table VI.7. The countries that had fairly free access to the United States market - its friends and allies - tended to obtain their arms imports from that country. There were exceptions - the special relationship that Finland had with the Soviet Union is reflected in a high degree of dependence on that country for its arms supplies, while South Africa was excluded from the United States arms market for political reasons. The other large exporters - France, Germany and the United Kingdom - relied very heavily upon the United States for those supplies that they did not produce domestically. In all, the industrialized countries purchased over three quarters of their supplies from the United States.

The sophistication of United States weaponry means that, if domestic producers were to make up for declining sales at home by exporting to developing countries,[66] existing arms races in those countries would become more expensive, being not only over quantity but also over quality. Apart from the dangerous implications for world peace, such qualitative arms races would be a massive waste of the resources of developing countries and could set back their socio-economic development.

Steps are being taken to avert such arms races. There was considerable concern after the war in the Persian Gulf to ensure that arms exports, particularly into the Middle East, were monitored carefully. On a proposal from the United States, the permament members of the Security Council took an initiative to meet in July and October 1991 in Paris and London to work out guidelines to restrain their conventional arms transfers to all regions and to ensure the non-proliferation of weapons of mass destruction.[67] In their Paris communiqué, they "agreed to support continued work in the United Nations on an arms transfer register to be established under the aegis of the UN Secretary General, on a non-discriminatory basis, as a step towards increased transparency on arms transfers and in general on military matters". In 1991, the General Assembly, in resolution 46/36 L, requested the Secretary-General to set up this register, which would cover imports and exports of certain types of conventional weapons.

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[66] The United States policy is one of considerable and tight control over its transfers of weapons and military technology.

[67] The texts of the communiqués of the meetings and the set of guidelines on conventional arms transfers agreed by the five at their London meeting are given in United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers, 1990* (Washington, D.C., 1991), pp. 23-24.

Table VI.7. Arms transfers among the developed market economies, 1985-1989

(Millions of current United States dollars)

		Source								
		United States								
Recipient	Total		(percentage of total)	USSR	France	United Kingdom	Germany	Eastern Europe	Other Europe	Other
United States	9 930	--	--	--	1 300	2 700	900	5	1 300	3 725
Japan	5 490	5 300	96.5	--	10	160	20	--	--	--
Australia	4 550	4 100	90.1	--	30	130	80	--	190	20
Germany	3 530	2 600	73.7	--	360	60	--	--	10	500
Spain	3 335	2 800	84.0	--	70	210	10	--	230	15
Greece	3 210	1 800	56.1	90	1 000	--	210	20	60	30
United Kingdom	3 200	3 200	100.0	--	--	--	--	--	--	--
Netherlands	2 560	2 200	85.9	--	--	10	330	--	20	--
Switzerland	2 210	450	20.4	--	30	350	1 200	--	20	160
Belgium	1 460	1 400	95.9	--	60	--	--	--	--	--
Norway	1 275	675	52.9	--	10	--	60	--	525	5
Italy	1 220	1 200	98.4	--	--	--	--	--	--	20
France	980	900	91.8	--	--	10	--	--	60	10
Canada	825	735	89.1	--	--	--	--	--	90	--
Finland	650	50	7.7	440	20	40	--	--	100	--
Denmark	570	500	87.7	--	20	20	--	--	30	--
Sweden	540	420	77.8	--	20	30	40	--	30	--
Portugal	390	250	64.1	--	30	--	20	--	40	50
New Zealand	315	190	60.3	--	--	30	20	--	5	70
Austria	240	70	29.2	--	10	--	--	--	160	--
South Africa	185	5	2.7	--	--	--	30	--	--	150
Ireland	90	40	44.4	--	20	20	--	--	10	--
Luxembourg	40	40	100.0	--	--	--	--	--	--	--
Non-United States	36 865	28 925	78.5	530	1 690	1 070	2 020	20	1 580	1 050
Total developed marked economies	46 795	28 925	61.8	530	2 990	3 770	2 920	25	2 880	4 755
USSR	5 910	--	--	--	--	--	--	5 900	10	--
Non-Soviet Warsaw Pact	17 755	--	--	15 500	30	--	20	2 175	20	10
Economies in transition	23 665	--	--	15 500	30	--	20	8 075	30	10
Total non-developing countries	70 460	28 925	41.1	16 030	3 020	3 770	2 940	8 100	2 910	4 765
Developing countries	186 125	31 555	17.0	86 435	15 055	10 325	3 250	9 875	11 090	18 540
OPEC	70 235	6 375	9.1	19 130	10 450	8 290	380	6 020	6 735	12 855
World	256 585	60 480	23.6	102 465	18 075	14 095	6 190	17 975	14 000	23 305

Source: United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers, 1990* (Washington, D.C., 1991).

The future for the peace dividend

The main lesson from the discussions about the peace dividend may be that the greatest peace dividend coming from the end of the cold war is peace itself and that international action and cooperation are required to achieve it.

A critical issue concerning military spending and industrial reorganization in the developed market economies is what will happen in the United States, the pre-eminent military power. Now that the strategic situation has changed radically, the United States is looking at its military structure and reviewing the options. Some suggestions might be controversial[68] and the executive branch, the legislature and the media can be expected to review very carefully the contingencies that the armed forces are supposed to meet and the underlying assumptions. Alternatives, often involving an enhanced role for international cooperation, particularly through the United Nations, are often invoked.

The force of arguments for a careful scrutiny of the defence posture comes from the growing appreciation that a country's security and its international standing depend not just upon its military strength, but also upon the robustness of its economy, which reflects its domestic spending priorities, and upon its ability to participate in international cooperation. Security can never be measured solely in terms of an individual country's military strength; security also depends upon the confidence a country can place in its neighbours and other countries, mutually beneficial economic cooperation, the stability of a country's import supplies and the ensured access to markets for its exports, as long as they remain competitive.

The ongoing domestic debate within the United States on the kind of role it expects to play in the world and, by implication, the kind of military it will have, is of profound importance not just for the country itself, but for the overall global community.

With the end of the cold war, the participation of United States forces in peace-keeping operations can be envisaged. The concept of peace-keeping is itself being refined with experience and, unfortunately, new conflicts. In this connection, it has been suggested by a former United Nations official that countries which find it difficult to pay their assessments for peace-keeping should shift this cost to the defence budget rather than the diplomatic or foreign aid budgets, which tend to be much smaller.[69]

In the longer term, then, the question of a peace dividend can be seen not so much as one of how to spend a given volume of resources or compensate for the short-term demand-reducing effects of cuts in military expenditure, but of how the military structure and the resources that it currently absorbs should be redesigned to support a new system of global relations. The large volume of resources absorbed by the military are potentially available for helping resolve some of the most important problems on the global agenda and for making possible sustained socio-economic advance in a peaceful international environment.

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[68] A recent document that caused considerable debate was the Pentagon's 18 February 1992 draft of the Defense Planning Guidance for the Fiscal Years 1994-1999. Although this document was classified, excerpts of it have appeared in the United States press (see *The New York Times*, 8 March 1992).

[69] Sir Brian Urquhart, reported in *The New York Review of Books*, 9 April 1992, p. 42. The media and some legislators in the United States have recently taken up this suggestion that peace-keeping be funded from the defence budget.

CHAPTER VII

ENTREPRENEURSHIP AND THE DEVELOPMENT CHALLENGES OF THE 1990S

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CHAPTER VII

ENTREPRENEURSHIP AND THE DEVELOPMENT CHALLENGES OF THE 1990s

Unfavourable global economic conditions and disappointments with past development strategies have focused new attention on domestic policies and institutions. A growing consensus recognizes that appropriate interaction between government activities and market forces, rather than exclusive emphasis on one or the other, provides the most conducive environment for tackling the complex problems of sustained economic development and the alleviation of global poverty. Although it would be naive to assume that there is any simple solution to these problems, a longer-term vision of change in which entrepreneurship has a key role can open new perspectives on the challenge of development[1].

This chapter sets forth a number of key features pertaining to entrepreneurship and its role in bolstering productive potential and promoting rapid restructuring. The chapter begins with a reassessment of the concept of entrepreneurship and offers some broad historical lessons drawn from the performance of rapidly developing economies over the last century. The nature of an enabling environment for private enterprise is outlined and more specific institutional requirements and policy measures in support of productive entrepreneurship are suggested. Experiences with entrepreneurship in Africa, Asia, and Latin America, as well as the transition economies in the eastern part of Europe--here collectively referred to as East--are presented in the latter part of the chapter.

On the concept of entrepreneurship

Because the development challenge facing many economies involves the simultaneous destruction of a considerable proportion of existing capacity and the installation of new capacities, geared in many cases towards the production of altogether new goods and services, it is useful to that recall Schumpeter's idea of entrepreneurship as "creative destruction". This implies a process of unsettling and unseating the established routines of producing and distributing goods and services through the introduction of new knowledge or the combination of old knowledge in radically different ways with the goal of improving the competitive strength of the productive unit into which the change is introduced.

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[1] This chapter continues the concern expressed over the past few years in various documents and reports from the United Nations Secretariat that added weight should be placed on entrepreneurship in the development process; see The Journal of Development Planning, No. 18, 1988; the report of the Secretary-General on national entrepreneurs in economic development, A/45/292-E/1990/82; and the resolution adopted by the General Assembly on entrepreneurship, A/RES/45/188, 8 February 1991.

Although it provides a useful backdrop, the traditional Schumpeterian analysis concentrates on dramatic technological breakthroughs by a single individual or firm driven by the expectation of monopoly rents, which ignores the wider institutional innovations that must be an integral part of economic transformation and the incremental and cumulative changes of products, processes and organization that are a permanent aspect of successful entrepreneurship. In both respects, entrepreneurship calls for learning, imitating and experimenting capabilities in addition to the more familiar qualities of risk-taking and a willingness to challenge established producers. Moreover, the assumption that the profit motive guarantees creative outcomes fails to distinguish among different types of entrepreneurial activity in terms of their effect on the growth potential of the economy.

Given the variegated and complex nature of modern entrepreneurship, it is helpful to distinguish among entrepreneurial activities, capabilities and environment. Entrepreneurial activities are the actual processes of introducing new knowledge to transform the existing use and combination of resources, improve the availability and quality of goods and services and increase the effectiveness of organizations and markets through which wealth is generated and distributed. As such, entrepreneurial activities are not exclusively aimed at improving cost competitiveness or, for that matter, at yielding wider benefits for the economy as a whole. Indeed profit incentives may encourage activities that aim to divert existing resources rather than create something new.[2]

A distinction among productive, unproductive and destructive entrepreneurial activities helps identify both the actual and possible developments facing developing countries.[3] Productive activities are those that eventually will have to be promoted in order for countries to attain a sustainable, higher-level growth path. Unproductive entrepreneurship involves rent-seeking activities of questionable value to society as a whole, although it is possible that unproductive entrepreneurial activities can give rise to or be transformed into productive entrepreneurship. Destructive entrepreneurship leads to subtracting value from society, perhaps by inhibiting the emergence of productive entrepreneurship. To the extent that unproductive and destructive activities predominate, the outlook for the emergence of productive entrepreneurship, and hence an important stimulus to regaining a new, self-sustaining growth path, remains poor.

Seen in this light, promoting entrepreneurial capabilities and an environment conducive to productive entrepreneurship takes on great significance. Entrepreneurial capabilities encompass attitudes, knowledge and skills required to engage in productive entrepreneurship. This involve more than simply risk-taking or the knowledge required to purchase and install the appropriate technologies. Rather, it involves a broadly based commitment to learning, imitating and experimenting by productive agents throughout the economy. In this sense entrepreneurial capabilities will not be the exclusive preserve of one individual but will often reflect the collective endeavours of diverse groups of people, both within and outside the firm.

The expansion of the private sector and the emergence of a variety of independent practices geared to profit-making are necessary conditions of entrepreneurship. But these are not necessarily sufficient conditions for the emergence of productive entrepreneurship. And in any case, productive entrepreneurship is not always a spontaneous outcome of self-interested behaviour and many activities are likely to be unproductive or even destructive, particularly where a very uncertain future presages short-term horizons. This represents a situation of incipient entrepreneurship. An urgent task facing the transforming economies in the eastern part of Europe in particular must be creating the appropriate capabilities with which to enhance productive entrepreneurship. The agenda of infant entrepreneurship combines the tasks of encouraging and disseminating appropriate entrepreneurial capabilities among individuals and organizations and constructing an enabling environment in which these capabilities can be fully utilized in productive activities. Once established, the evolution towards a more mature entrepreneurship should be a realistic goal.

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[2] Although entrepreneurs may be defined simply as "persons who are ingenious and creative in finding ways that add to their own wealth, power, and prestige, then it is to be expected that not all of them will be overly concerned with whether an activity that achieves these goals adds much or little to the social product or, for that matter, even whether it is an actual impediment to production" (William J. Baumol, "Entrepreneurship: productive, unproductive, and destructive", Journal of Political Economy, No.5 (1990), pp. 897-898).

[3] This terminology is from William J. Baumol, op. cit., pp. 893-921.

National systems of entrepreneurship in market economies

Why some societies have grown more quickly than others is a complex question to answer. An obvious starting point is to look for possible lessons from countries that have successfully traversed the path from rapid economic growth to long-term development. Needless to say, policies and institutions that have worked for one country may not produce the desired results in a different socio-economic context. However, to the extent that economic development can be described as catching-up with more advanced countries through imitation and adaptation of the institutions that have fostered rapid growth, identifying the relevant institutions seems a logical starting point.

The strengths and weaknesses of private enterprise

The acceleration of the pace of economic change over the past two centuries reflects more than the augmentation of factor inputs. Indeed, the rapid assimilation of frontier technologies; the continual upgrading of goods and services; and the reorganization of production, distribution and marketing have played a critical role in accelerating the pace of economic growth and prosperity. Productive entrepreneurship broadly describes this process of transformation. The experiences of late developers show that a national system of entrepreneurship[4] describing a network of public and private incentives and linkages that encourage risk-taking, learning, imitating and experimenting is essential to rapid economic growth. In this respect late developers have adopted mixed-economy models, with varying combinations of incentives and linkages.

A private-enterprise economy is characterized by firms with well-defined property rights who contract with other firms, financial institutions and individuals to guarantee their necessary supply of inputs and the distribution of their output. Decisions affecting the activity of producing and distributing goods and services are the responsibility of individual owners or their delegates--usually those managing the firm. The information necessary to carry out transactions is supplied through market prices and motivated by self-interest within the national macroeconomic and legal frameworks. The advantages of such a system is the decentralization of decision-making. Individual responsiveness to price signals removes the need for a complicated structure of authority through which information is gathered and disseminated and guarantees an element of responsiveness and flexibility in the system. In addition, the proliferation of sources of innovation that accompanies decentralization and the reward of transient quasi rents encourage risk-taking through experimentation and the institutional framework in place is sufficiently flexible to respond adequately to this need. The private-enterprise system thereby not only accommodates different individuals seeing different opportunities in a diversity of ways but also ensures that winners and losers are determined in an actual contest.[5] However, whereas speed as such may be essential to each individual unit in a private-enterprise system, the direction of change may be more important for the system as a whole. In this respect, innovation and productive entrepreneurship may not be best served by unrestrained private enterprise. Consequently, rapidly developing economies have established various organizational mechanisms to enhance and in some cases supplement the creative role of markets.

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[4] The term is adapted from Bengt-Åke Lundvall, "Innovation as an interactive process: from user-producer interaction to the national system of innovation", in Technical change and economic theory, edited by Giovanni Dosi et al. (London: Pinter Publishers, 1988), pp. 349-369.

The modernizing state

Prior to the period of rapid economic development and industrialization in developed market economies, the orientation of state activities with respect to economic affairs was governed by a system of tutelage and patronage favouring existing routines rather than fostering innovation. Consequently, breaking the links with non-productive activities and the associated interest groups was a conditio sine qua non of modern development. The initial shock was often exogenous.[6]

But disruption alone is not enough to ensure a creative role for the state. In this respect, two conflicting pressures have shaped the formation of modernizing states. On the one hand, the state has had to accept, and indeed encourage, a more flexible economic structure supportive of independent entrepreneurial activity. This process of liberalization was often initiated through the sale of state property or the loosening of the legal and fiscal frameworks that impeded buoyant economic activity.[7] Subsequently, transforming economies have evolved a competition policy that recognizes the positive stimuli coming from the entry of new producers and the exit of established, but less competitive firms.

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[5] The importance of these factors in the development of first the British and then the United States economy are clearly discussed in N.Rosenberg and L.Birdzell, How the west grew rich (New York: Basic books, 1986).

[6] Thus Sweden's defeat in the Napoleonic Wars symbolized by the loss of Finland was quickly followed by modernizing tendencies beginning with the first European constitution in 1810; France's defeat in 1940 and the abrupt loss of its colonial empire after World War II provided a major impetus to the modernizing state and fostering entrepreneurship; Japan's abrupt emergence from isolation with the arrival of Commander Perry coincided with the breakdown and fall of the Tokugawa regime and the formation of a modern social framework; and the nationalist upsurge against the Hapsburg Empire released similar pressures in parts of Central Europe, although circumstances fostering rapid development remained unpropitious.

[7] Thus deregulation of the Swedish iron industry and forestry in the mid-19th century unleashed considerable opportunities for private initiative. The commercialization of state-owned property in post-war France played a similar role as did the privatization of maturing state-owned industries in the Republic of Korea and Taiwan Province of China.

Although many countries have succeeded in developing rapidly with little state ownership (Hong Kong, Japan and Sweden), some modest public ownership particularly of infrastructure (Singapore and the Republic of Korea) or more extensive control extending into industry itself (Austria, Finland, France and Taiwan Province of China) is not inconsistent with the activities of a modernizing state.

On the other hand, regardless of the precise mix of private and public ownership, the state has acquired capabilities and leverage to force the pace and direction of economic change, and to respond to entrepreneurial activity developing in unproductive directions and in ways that would not enhance national productivity and competitiveness. In this respect, the formation of new state institutions and ministries with creative, rather than simply dictatorial or reactive, links to independent private economic agents has been crucial.[8] These state capabilities have often been fostered through infrastructural development (as in Austria, Finland, France and Sweden) and/or agricultural restructuring (as in Japan, Republic of Korea and Taiwan Province of China), establishing the skills and linkages that could subsequently be employed in the more challenging areas of industrial transformation. Above all the state created a modern education system to support a broadly based development of human capital and the creation of appropriate vocational, particularly engineering, skills that enhanced experience-based learning.[9]

Such educational reforms have established long-term learning strategies and tolerance of experimenting which has developed into a national commitment to innovation with a particularly high value placed upon research and development (R&D).[10]

Industrial leadership

An ideal private-enterprise economy would comprise a large number of small firms. However, the industrial structure generated by successful national systems of entrepreneurship comprises firms of varying sizes. Certainly small and medium-sized firms provide many of the horizontal relations characteristic of a market-type economy, encourage organizational flexibility and can provide employment opportunities in rapidly developing economies. However, large firms are particularly supportive of entrepreneurial activity that involves economies of scale and scope. This is true of much R&D-intensive industry, especially those firms involving a commitment to basic research or where the imitation of new products and processes from international sources is involved. Moreover, the financial stability and the ability to persevere with a project through its initial stages of commercialization favour entrepreneurial activity involving sizable initial investments, such as in the case of new production technologies. The chemicals industry, transportation equipment and machinery for heavy industry typify industries where entrepreneurship is best harnessed through larger firms. Sweden, for example, has a remarkable number of large international companies that dominate domestic supply and have been encouraged despite strong domestic anti-trust policy; in Japan the post-war attempt to break up the zaibatsu miscarried as new types of association, the keiretsu, were quickly reconstituted; the chaebol (inherited from colonial times) in the Republic of Korea were preserved even in the drive against industrial corruption by the Park government in the 1960s; and in post-war France, and more recently in Taiwan Province of China, large state-owned enterprises have been established as technological leaders. In these cases, larger corporations have provided the basis of a strong employers' organization that could articulate an independent voice for industry or have forged informal contacts with the government to press their demands.

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[8] For example, the indicative planning of the French Finance Ministry and the visionary role of the Modernization Commissions signified a break with France's previous uneven economic development. The Republic of Korea nationalized its banking sector and formed a powerful group of economic ministries to oversee development. Planning in Taiwan Province of China was coordinated through the Industrial Development Bureau and state ownership of industry's commanding heights. Japan's MITI typifies the creative potential of such state institutions.

[9] In many respects, Germany's engineer-entrepreneur provided the model for rapid development in other countries. However, there have been important innovations: Sweden, and to some extent Finland, supported the study of its citizens abroad; Japan has closely tied its education to the process of reverse engineering; the post-war French state concentrated its reform on the tertiary level through a modernization of its civil-service training, including training for industry; both the Republic of Korea and Taiwan Province of China expanded their secondary and tertiary levels of education as a means to properly absorb the knowledge provided by foreign technology.

[10] Research units have been established at a national and industrial level with a mixture of state and private support (as in Japan, Republic of Korea, Sweden and Taiwan Province of China); support for firm level R&D has come through the defence industry (as in France and Sweden) and less selectively through tax incentives (as in Republic of Korea); closer links to basic research institutions have been established (as in Japan and Sweden) and the government has often acted as a leader in introducing new technology (as in Japan, Republic of Korea and Taiwan Province of China); the state's own procurement policy has been used to encourage technological diffusion in the private sector (as in Sweden).

However, sectors with smaller-scale producers have, through the entry of new firms, been an important source of entrepreneurship and economic dynamism. This is particularly true in certain areas of precision engineering, but also in consumer goods and craft-based industries, often drawing on strong family or regional ties as a source of dynamism. Moreover, even where large firms have taken a prominent role, the links between large and small firms have become increasingly important, such as in the more sophisticated Japanese and Swedish engineering sectors, where extensive supplier networks have supported a flourishing entrepreneurial environment.

International integration

Competitive pressure has not only come from domestic liberalization but through integration into the international economy. Building export capacities is essential to rapid growth. It not only provides the resources to finance imports of machinery and debt service, but also the opportunities of scale economies, a cost discipline on domestic producers and increased awareness of product standards. But export promotion has not meant blind acceptance of market competition. External competition from mature industries can prevent new entrants from establishing the required capabilities to foster productive entrepreneurship. Consequently, a wide variety of strategic measures have been employed to direct international market pressure.

Tariffs have been used extensively but selectively. The development of both Japan and Sweden testifies to the benefits that can be achieved by pursuing an outward-looking strategy behind temporary protective walls; protection of agriculture in late 19th century Sweden acted as an incubator for more important infant industries and in inter-war Japan protection was part of a broad strategy of building an endogenous technological base through reverse engineering. Most Western European and North American economies raised their tariffs during periods of rapid development.[11] The Republic of Korea and Taiwan Province of China have employed a variety of selective controls on imports and selective subsidies for exports; both have developed incentive schemes that tie export performance to import capacities although such schemes have diminished in importance as the industries mature.

International integration of the goods market has often been related to other external linkages. Access to foreign capital and technology has played a critical role particularly in the early stages of development. Sweden was the largest debtor nation in Europe in the late 19th century and the Republic of Korea was highly indebted during its early stages of development. Japan was more cautious in its formative stages of development in the late 19th century and Taiwan Province of China has hardly resorted to foreign private capital markets. But careful government monitoring, strong employers' organizations or networks of professionals, including financiers, have ensured the development of endogenous entrepreneurial capabilities. Foreign direct investment has been used to access the latest technology and transfer appropriate capabilities in a number of countries[12] but functional support through training and selective intervention to ensure the evolution of more sophisticated technologies have been necessary.

Industrial banking

An appropriate financial structure is essential to an entrepreneurial mixed economy.[13] However, there can be no assumption that the interests of private banks and the producers of goods and services will coincide through market signals. Considerable diversity, in fact, characterizes market-type financial systems. These differences are not only apparent between countries of a "bank" or "stock exchange" orientation, but also between those that have adopted a similar design. These differences reflect the evolution and adaptation of financial institutions and regulations in market economies to their particular pattern of development, changing economic structures, specific demands for financial services, as well as tradition and cultural influences.

However, productive entrepreneurship require certain common responses from the financial system. Giving up existing routines and experimenting with novel paths for solving problems entails considerable risk and is likely to involve longer gestation periods when profits are uncertain. Many such projects are proposed and carried out by newcomers, and often small businesses, lacking established contacts with financial institutions or the corporate sector. Although the challenge is probably bigger for individuals and smaller firms than for large corporations, their situation in facing a new opportunity is similar in many ways.

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[11] A noticeable feature of tariff levels in these countries during their early phases of development–between 1820 and 1950–is their variability, which strongly implies a strategic use (see World Development Report, 1991 (Washington DC: World Bank, 1991), p. 97).

[12] Both Hong Kong and Singapore have been particularly successful in this regard.

[13] Banking under some conditions has hastened and in others distorted and retarded economic development and entrepreneurship (see the studies compiled in Banking and Economic Development, edited by Rondo Cameron, New York and London: Oxford University Press, 1972).

In order to support such activities, some kind of industrial banking has to be developed. It must be capable of identifying and selecting entrepreneurs with some potential for success, realistically assessing risks associated with various entrepreneurial projects and adjusting credit arrangements, assisting and cooperating with would-be entrepreneurs in launching and managing projects providing a variety of standard and non-standard services. This capability involves adequate professional knowledge (such as strategic management, industry assessment and credit options), skills (risk-assessment techniques) and an appropriate risk orientation.

Sometimes the financial system has been closely controlled by the state. In other cases it has evolved under the auspices of powerful industrial bankers or as part of larger industrial conglomerates. In all cases, however, their success has derived from the establishment of long-term financial relations and a necessary element of trust and familiarity between suppliers and capital recipients. The nature of support has varied, ranging from direct subsidization through favourable repayment schedules and at below-market interest rates; guaranteeing equity issues or directly purchasing shares; establishing linkages between firms with complementary activities; and in many cases, the banks themselves becoming agents of restructuring in the face of faltering enterprise performance.

The importance of entrepreneurship lies in its transformative function. Private enterprise provides a powerful but incomplete incubator for productive entrepreneurship. In successful national systems of entrepreneurship a diverse mixture of market incentives and non-market relations have facilitated rapid growth. A successful system provides the opportunity for entrepreneurial activity by removing constraints, improving information flows and enhancing the capabilities of learning, imitating and experimenting, and sharing the risks surrounding entrepreneurial activity. This creative element is accompanied by the removal of existing routines and skills threatening the interests and livelihood of "traditional" groups in society. Some way of managing the conflict accompanying productive entrepreneurship must be found. Historically, and with varying degrees of success, it has been achieved through widely divergent political structures, authoritarian or hierarchical control, corporatist traditions or the extension of already robust democratic practices.

Establishing an entrepreneurial environment

Over the past decade the failure of many developing and planned-economy countries, the unmanageable domestic and external debt, the misallocation of capital, fiscal imbalances, uneconomic subsidies and inefficient state enterprises have destroyed the belief in the elusive benefits of planned development and "market-friendly reforms" are now urgent in support of private enterprise and decentralized decision-making.

The goal of establishing and extending a viable private-enterprise economy has revolved around three interlocking sets of measures: liberalization, privatization and stabilization. The precise policy mix differs depending upon the legacies and constraints facing any particular economy and the potential resources they have available. However, the common emphasis is on the unimpeded use of market signals and the establishment of an environment that enables entrepreneurs, managers and suppliers of productive factors to respond most effective manner to price information.

Liberalization

Markets almost by definition provide a framework within which micro-economic agents voluntarily engage in contracts. These may be tacit or explicit, but transactions involve an agreed modus for transferring a good, service or production factor (and oftentimes only its service streams) from one agent to another using price information. The ready availability of such information establishes competitive pressures as central to the outcomes of a market economy. This can work smoothly only if basic institutions of property rights are in place and agents obtain access to resources with which they can seek to increase their income stream.

Despite its integral role there are markedly differing expectations attached to the liberalization process. On the one hand it signals a decisive break with a previous regime of hierarchical and politically prescribed economic coordination. On the other hand, by providing the most hospitable environment for self-motivated individuals, liberalization is expected to improve welfare by eliminating shortages, increasing the responsiveness of domestic producers and creating an environment suitable for longer-term economic prosperity through explicit policy actions encouraging the flexibility of market-based adjustment. The precise relation between these two aspects of liberalization is complicated and continues to form part of the debate on the proper sequencing of reform (see Box VII.1).

Certainly, a competitive environment in which firms must continuously assess their current costs and respond to changing consumer demands through appropriate investment and restructuring strategies harbouring significant growth potential is a necessary condition of entrepreneurship. However, competition does not simply take place through price considerations nor does it return an economy to some well-defined equilibrium state. Rather exit and entry pressures provide the rewards and sanctions that foster continuous change through the introduction of better ways of doing things. In this respect, two areas of competition policy merit attention.

The relatively unencumbered entry and exit of firms is essential. A new--or renewed--class of entrepreneurs will thereby be encouraged to establish firms offering unfamiliar products or producing existing products in more effective ways. In addition, emerging small firms can be expected to impart an important element of organizational flexibility and provide a valuable source of employment. The incentives to encourage these new activities require, in addition to a robust price system, a legal and fiscal framework to ensure that the potential profit is captured by the innovative firm; the introduction of a legal code enforcing contracts and regulating cartels, mergers and market power; the establishment of a patent system; and the introduction and effective implementation of bankruptcy laws. Only then can markets provide an environment in which creative entrepreneurship could begin to prosper.[14]

In addition, productive entrepreneurship must assemble a series of complementary activities and create an interactive environment conducive to learning and information exchange. A critical issue is how quickly firms develop the entrepreneurial capabilities needed to function in this new environment. The lack of competent managers with the

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[14] The types of legal code supportive of modern entrepreneurship are discussed in T. Jorde and D. Teece, "Innovation and cooperation: implications for competition and antitrust", Journal of Economic Perspectives, No. 3 (1990), pp. 75-96.

Box VII.1. Structural adjustment and the sequencing of policy

Macroeconomic stability and liberalization have been identified as mutually enforcing conditions of productive entrepreneurship. Policy measures identified with the former mainly work on the demand side, reducing inflation and balance-of-payment difficulties through sound fiscal and monetary policies and a competitive and flexible exchange rate. Regaining stability is seen as essential to promoting higher rates of domestic saving and investment, attracting foreign capital and technology and retaining the trained labour force, all of which are possible prerequisites of productive entrepreneurship. However, stabilization is unlikely to sustain longer-term growth without the structural reforms that can ensure the appropriate supply-side response and the effective use of capital. These reforms have been identified with the removal of regulations impeding market flexibility, such as price controls, subsidies, trade barriers and procurement policies.

The implementation of both sets of reforms and the appropriate relation between them are surrounded by trade-offs, credibility questions and timing problems that engage the capacities of politicians as well as the technical competence of economists. The process is complicated by the fact that accompanying institutional reforms – privatization, deconcentration, demonopolization and financial restructuring – will meet resistance from vested interests, and that considerable social costs will accompany such reforms. Finally, the effectiveness of any policy agenda will be influenced by developments in the global economy. Consequently, and although some policies can be introduced more quickly and effectively than others, a suitable sequencing of the process of reform is necessary.

All these factors will have a bearing on the emergence of productive entrepreneurship. The sequencing of reform has not paid sufficient attention to the interaction between macroeconomic stability and entrepreneurship which is by definition a destabilizing process. Inadequate demand, high interest rates, liquidity problems, low profitability and high failure rates may be as great or greater an obstacle to entrepreneurship as high rates of inflation, underfunded public infrastructure and an uneducated and polarized workforce.

The recent lessons from the East have raised new issues in the sequencing of reform that in part reflect the particular legacies of these economies. It seems increasingly apparent that in a second-best world where theoretical simplifications rapidly break down, a considerable degree of pragmatism is called for in the search for appropriate strategies to bolster the supply side. The required linkages to establish productive entrepreneurship will not evolve spontaneously with the correction of short-term imbalances and must anyway depend on the type of market economy that is aimed for.

requisite technical and personnel skills poses an obvious barrier to growth. Publicly funded training programmes can be effective in this respect, and policies in support of a mobile labour force with the appropriate skill profile are needed.

Property rights and privatization

Although public and private property may have very different effects on the allocative and productive efficiency of resource use, including their dynamic efficiency, in both cases if the owner does not exercise direct property rights a manager must be employed which gives rise to the so-called principal-agent. An effective monitoring system is required.[15] Changing from public to private property rights does not intrinsically alter this need for monitoring managerial behaviour and company performance.

Property-rights embody features that do not necessarily pertain to private ownership per se. Certainly, property rights' reform includes assigning property rights to existing assets, and here the overlap with privatization is obvious. However, protecting existing property rights through monitoring, incentives and legal enforcement mechanisms refers more broadly to governance structures. In addition, the assignment and guarantee of property rights to assets to be created from public and private savings is critical to elicit new savings and the formation of small and medium-sized enterprises that can form the backbone of successful entrepreneurship and provide the platform whence a new, self-sustainable growth path can take off.

Although examples of efficient public enterprises exist in both developed and developing countries, it is now widely felt that taking the state out of the decision-making about the allocation of assets that it nominally owns is one of the most urgent and difficult tasks confronting transforming countries, particularly those of the East[16] but also developing countries that had established large state sectors. The process of removing the state from micro-managing the allocation of capital assets forms the subject proper of privatization in developing economies. The desirability of doing so depends upon the existing environment for private enterprise and on how quickly improvements in this environment can be brought about. This is particularly important in transforming economies that previously relied overwhelmingly on the central allocation of resources.

A rich literature on the mechanics of privatization has emerged from the experience of formerly planned economies and, although their particular legacies caution against any overgeneralizations, important lessons can be drawn. First, any process of privatizing is likely to encompass a sequence of distinct phases, possibly ranging from endowing state enterprises with a corporate structure recognized in a legal code, to placing such firms on a firm commercial footing, to divesting part of the property rights (the usufruct) to non-state agents and to full divestment through sale or free distribution to the population at large and former owners. Though this concept differs from the way privatization is widely viewed in advanced market economies, it is probably the preferred concept in economies in transition.[17] It also applies to developing countries with limited financial infrastructure and savings.

Second, depending upon the extent of the existing state sector, an effective privatization agency is required, which itself needs to display a good deal of entrepreneurial spirit in determining the speed, sequence and comprehensiveness of privatization, resolving legal disputes and putting in place as quickly as possible interim regimes that provide incentives to existing management and workers to improve the efficiency of their firms. Such an agency will, moreover, have to face difficult political choices that can not be resolved through simple technical schemes, independently of the wider social context.

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[15] Principal-agent identifies the two parties involved in any contractual agreement in which one (say, the owner of an asset) provides incentives to the other (say, the person employed to manage the asset) that will maximize whatever objective function the 'principal' has. However, because asymmetric information prevents the ultimate owner from fully directing and monitoring his/her agent in the maximization of net asset values, a potential conflict of interest exists. Consequently there are transaction costs, which can often be identified only in the process of enforcing property rights including through an orderly adjudication of conflicting claims.

[16] The issues of property rights and the methodology of privatization in the context of the economies in transition are dealt with in detail in Jozef M. van Brabant, "On the economics of property rights and privatization in transitional economies", Supplement to World Economic Survey 1990-1991 (New York: United Nations, publication sales No. E.92.II.C.3), forthcoming.

[17] The issues are discussed at length in Economic Survey of Europe in 1991-1992 (New York: United Nations, publication sales No. E.92.II.E.1), chapter 6.

The reasons for privatization include political, ideological and financial pressures on the state itself, in addition to past disappointing economic developments. However, in the context of entrepreneurship two additional points need to be carefully considered. Privatization implies investing economic agents at large with greater entrepreneurial incentives, but there are considerable differences between economies in the way in which potential agents can fully utilise this opportunity. The lack of entrepreneurial capabilities, weak incentives or inappropriate linkages supporting innovative activity could rapidly derail the privatization process. Additionally, it cannot be assumed that one form of ownership will be superior to another in all industries and in all countries and at all times. Moreover, economies of scale and sunk costs of existing state-owned enterprises place fairly stringent limits on the degree of deconcentration and demonopolization that can be pushed through at an acceptable cost, given the inevitable disruption of established links. For both reasons, a diversity of governance structures, with varying links between government and private enterprise is likely to be the best solution to combining risk-taking, learning and experimentation.[18] Moreover, these links, including subcontracting, franchising and licensing, are likely to provide the appropriate environment in which large and small private sector firms can share the tasks of entrepreneurship.

Consequently, the allocative and productive efficiency implications of property assignments depend very much on the competitive and regulatory environment in which economic agents operate. This environment typically has substantially larger effects on performance than ownership per se. But ownership, competition, and regulation are essentially three shorthand expressions for complex sets of mutually interlocking influences. The efficiency implications of a change in one of these elements will, as a rule, be contingent upon what happens to the other two. Effects of privatization, therefore, cannot properly be assessed in isolation from these additional influences on incentives.

Once clear property rights and adequate market institutions of the market are in place, the role of the private sector becomes critical in determining how to evolve towards fully fledged market economies. Private capital formation should be encouraged within the boundaries set by law and the macroeconomic policies and institutions. This is particularly important in the case of small and medium-sized firms. Fostering the formation of such firms, whether through a structural policy of the state or simply through the market, should rank high on the agenda of creating an enabling environment. However, market-friendly reforms do not lead to the spontaneous correction of structural imbalances. Moreover, a variety of institutions must evolve so as to foster the longer-term relations that do not arise from market incentives alone.

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[18] The issues are discussed in general by George Yarrow, "Privatization in theory and practice", Economic Policy, No. 2 (1986), pp. 324-377 and in the developing country context by H.J. Chang and A. Singh, "Public enterprise in developing countries and economic efficiency--a critical examination of analytical, empirical and policy issues" (Geneva: UNCTAD, working paper, 1992).

The financial infrastructure and entrepreneurship

Financial intermediaries--banks, non-bank institutions (including insurance companies, pension funds, investment and unit trusts) and securities markets--play a critical role in allocating national resources to various sectors and activities. Their main functions consist of collecting and allocating savings; monitoring their use and, if necessary, disciplining the managers and/or owners of past savings; and finally creating and managing the system of payments, clearing and settlement of reciprocal claims, including international transactions.

The historical evidence presented earlier shows that financial intermediaries have an important "insider" role, encouraging restructuring and innovative activity. To undertake such tasks they have to assume a certain entrepreneurial approach and acquire the appropriate capabilities in a way that will help allocate resources to innovative projects. The latter requires not only short-term financing arrangements but the establishment of longer-term commitments. In a "bank-based" system commercial banks have a leading role.[19] Such a system is centred on strong, lasting relationships between the banking and corporate sector with major banks owning substantial equity in big corporations and many medium and smaller size companies. Their representatives sit on boards of directors closely monitoring and shaping the decision-making and management process. Influence on corporate decisions and access to information enhance understanding and the propensity to support experimenting in a longer-term policy framework. However, limiting the control of the system to a small group of insiders has its price in the concentration of power and the possible lack of competition to foster allocative efficiency.

To encourage experimenting and rapid change is not the only function of the financial system. There is a certain trade-off between the macroeconomic stability of the system and the longer-term dynamism of enterprises facilitated by risky ventures. At a general level of discussion, there is broad agreement that commercial banking with some insurance instruments should play a leading role in the near- and medium-term development process. Moreover, a well functioning two-tier banking system is a key element in successful privatization and the provision of financing for new companies. New commercial banks are expected to improve the allocation of resources through enforcing hard budget constraints on both state-owned and private enterprises. A financial system based on a solid commercial banking sector is consistent with the actual stage of development and the demand for financial services in many developing countries. However, special attention must be paid to the financial needs of small enterprises engaged in productive entrepreneurial activity (see Box VII.2). In many developing countries, a larger proportion of new small and some medium-sized enterprises are managed by women, who have found it particularly difficult, just like the newly emerging agents in transition economies, to obtain access to bank financing, as well as a host of other elements essential to the expeditious running of their entrepreneurial activities (see Box VII.3). Over the medium to longer term

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[19] See Ronald I. McKinnon, The order of economic liberalization--financial control in the transition to a market economy (Baltimore, MD and London: The Johns Hopkins University Press, 1991) and Jenny Corbett and Colin P. Mayer, "Financial reform in Eastern Europe: progress with the wrong model" (London: Centre for Economic Policy Research, Discussion Paper Series No.603, September, 1991)

VII.2. Financial obstacles facing small firms

In the best of cases, the banking system and financial markets would provide adequate financial services for entrepreneurs. However, in country after country, lack of financial accommodation is reported as the principal problem of small entrepreneurs. Lack of credit access seems especially acute for women, who are often excluded from regular credit systems, and for growing enterprises that need capital to expand. Typically there is an even greater shortage of venture and equity capital for new enterprises.

Consequently, governments have created guarantees, lines of credit and special financial facilities to serve new small enterprises. Commercial banks in Asia and Latin America have been required to lend to small enterprises or have been provided with special central bank or apex institutions, refinancing or discount windows or concessions in the levels of reserves they must hold against small-enterprise loans. Special small-enterprise development finance institutions or small-enterprise windows within the context of foreign direct investment and other forms of assistance have been created. Apex refinancing lines have been opened on favourable terms to refinance small-enterprise lending, and partial and total guarantees have been arranged. All of these credit facilities have resulted in an increase in enterprise lending and new enterprise formation.

Nevertheless, small-enterprise lending programmes involve a high level of risk and are subject to potential mismanagement. Over the last few years, however, the prescription of how these credit schemes might be used has changed. The goal of intervention by aid donors is no longer simply to distribute money but also to provide a financial system that serves the needs of entrepreneurs. Creating sustainable financial institutions is an important element in these programmes. The management standards and acceptable levels of repayment for credit programmes have risen and market-level interest rates enable a larger loan fund (avoid decapitalization) and serve to direct funds to the most productive projects.

A greater openness to competition and freedom in financial markets have been combined with a renewed emphasis on prudential regulation. Less developed countries and donors now realize that financial innovation and competition may enable financial markets to meet many needs without government involvement.

Interest in extending credit to the smallest entrepreneurs is also growing. A number of initiatives across different countries have demonstrated that even the smallest entrepreneurs can be served by largely self-sustaining credit institutions.

other segments of financial system could and should naturally develop.[20]

Box VII.3. Entrepreneurship and the socio-economic advancement of women

Issues of equality, fairness and non-discrimination are behind most discussions of the economic role of women, including their role as entrepreneurs. Yet, under-utilization of the potential for decision-making and innovation of half the population is wasteful in and of itself.

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[20] For cogent arguments along those lines, see Jenny Corbett and Colin P. Mayer, "Financial reform in Eastern Europe: progress with the wrong model" (London: Centre for Economic Policy Research, Discussion Paper Series No. 603, September 1991) and Tadeusz M. Rybczyński, "The role of finance in restructuring Eastern Europe", ECU Newsletter, No. 3 (1991), pp. 8-12.

Corporate culture and the prevailing modi operandi of firms, at least implicitly, inhibit the participation of women, and in particular their climb in the enterprise hierarchy. Social attitudes and expectations about gender behaviour help to determine the parameters for the participation of individuals, male or female, in the work environment and as entrepreneurs. If the entrepreneurial potential of women is to be realized, changes in long-established attitudes and prejudices, will be necessary, together with a non-discriminatory legal system and supportive policies in areas as education and training, job segregation and wage discrimination, credit and child care.

Labour participation can be a platform and a learning process from which to progress towards entrepreneurial activities. Women's share in the labour force has increased almost everywhere in the last two decades. From 1970 to 1990, the share of women in the total economically active population rose from 35 to 39 per cent in the developed regions, from 24 to 29 per cent in Latin America and the Caribbean, and from 12 to 17 per cent in northern Africa and western Asia. In the rest of Asia it did not change much, staying between 35 and 40 per cent in South-eastern and Eastern Asia, and at a lower level, near 20 per cent, in southern Asia.

Most of the increase in the women's labour force has been absorbed by services.[a] Mirroring this development, a more than proportionate number of the new female entrepreneurs chose the service economy.[b] In developed countries, the number of women-owned businesses is growing, and is expected to continue growing in all OECD countries.[c] For instance, in the United States, in 1987, excluding large incorporated firms, 30 per cent of the businesses, accounting for 14 per cent of total receipts, were owned by women, as compared to 22 per cent and 10 per cent, respectively, in 1982.[d] Besides being more than proportionately represented among small-scale enterprises, the majority of women-owned businesses in OECD countries are concentrated in retail trade and service sectors, which are also traditional areas of female employment.[e]

In the East, the transition is changing the employment structure and labour market conditions. With de facto decentralization, it is uncertain how much of the existing favourable labour legislation, from job-protected maternity leave to day-care and preschool facilities, is being or will be kept intact. Unemployment has risen and inflation is eroding benefits.[f] Some analysts claim, however, that in the long run the changes will benefit the entrepreneurial activity of women, because there will be more choice and opportunity.[g]

In developing countries, even more than in developed countries, women entrepreneurs are often in small firms. A good deal of small-scale industry in developing countries might more accurately be described as micro-scale; small businesses are set up in the home or on the premises of the family, as "household" or "cottage" industries. A large share of these small firms is run by women. In Latin America, on average, one third of the micro-entrepreneurs and their workers are women, but the proportion is as high as 60 per cent in the rural area of Honduras, for example. In Africa, women play a major role in small-scale business.[h]

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[a] The increase of female labour in the service sector was stronger in the developed economies, in Latin America and the Caribbean and in Northern Africa. See The world's women 1970-1990: trends and statistics (New York, United Nations, sales publication No. E.90.XVII.3).

[b] This preference has been explained by the fact that much of service-sector activities are a market substitution of activities formerly performed in the household, such as child care centres or restaurants, and by psychological traits that would give women competitive advantage "to establish trust relationships when dealing with customers" (Rein Peterson and Klaus Weiermair, "Women entrepreneurs, economic development and change", Journal of Development Planning No. 18, 1988, United Nations, sales publication No. E.88.I.A.13).

[c] "Women - Local Initiatives - Job Creation" (Issues papers and country reports prepared for the Conference organized by OECD in Oslo, May, 1987); George Silvestri and John Lucasiewiecz, "A look at occupational employment trends to the year 2000", Monthly Labour Review, September 1987, pp. 46-63.

[d] INSTRAW, "Sources of data on women entrepreneurs in the United States and the companies they own", Working Paper No. 11, paper submitted by the United States Bureau of the Census to the "Conference of European Statisticians, Work Session on Statistics of Women", Geneva, 27-29 April 1992.

[e] Candida Brush, "Women and Enterprise Creation: An overview of women-owned businesses", in Enterprising Women (OECD, Paris, 1990).

[f] R. Andorka, "Economic difficulties -- economic reform -- social effects and preconditions", Acta oeconomica No. 3 (1988), pp. 291-302.

[g] Monica Fong and Gillian Paull, "Women's economic status in the restructuring of Eastern Europe", in Privatization and Democratization in Central and Eastern Europe and the Soviet Union: The Gender Dimension, edited by Valentine M. Mogdadam (Helsinki: WIDER/United Nations University, January 1992), p. 47.

In rural areas such small-scale industry is an important form of side-income for peasant households. According to one recent study, in Southern Sudan the wife's off-farm income arising from activities such as basket-making, grass-cutting and beer-brewing provided on average one third of the household's off-farm income. This share was 50 per cent in the poorest households.[i] For many of the poorer developing countries, UNIDO has estimated that some 50 per cent of women in rural small industrial enterprises provide such supplementary income to farm households.[j]

Very often small manufacturing enterprises are in the informal sector. The presence of women in the informal sector is large in developing countries. In a number of them, women account for a third or more of total urban informal sector employment. Often half, or more, of total women's employment in the urban area is in the informal sector. A majority of them are active in petty trading and service activities, where it is possible to start a business with little or no capital and little or no skills. Many also work at home performing piece-rate work for manufacturing enterprises.[k]

Micro-enterprises attract women because of low barriers to entry and the flexible nature of the work which permits to combine gainful employment with domestic responsibilities. These very factors, however, also make it difficult to expand their enterprises. Obstacles faced by women as business owners are connected to the limitations to their overall socio-economic attainment.[l] Such constraints can be grouped as social, legal and institutional, educational, and economic and financial.

Studies of family businesses in the industrialized countries have shown that while a woman's direct and indirect contributions to the family business may have been of vital importance, she was usually not expected to take an open leadership role.[m] Sons (and sons-in-law), but not daughters, were groomed to take over the business. This pattern may be changing in industrialized countries, but it still exists in large parts of the developing world. Women as a rule do not receive encouragement from family and peers to launch a business venture; and they tend not to have access to traditional business networks that provide contacts and assistance because these contacts are often found in associations that are de facto if not de jure for men only.

Domestic and business responsibilities can conflict. Even if there were no other obstacles, there is an obvious competitive advantage for those whose attempts to climb the corporate ladder or to succeed as entrepreneurs are unencumbered by what has been called the "dual work journey" of combining profession and family duties. Even if jobs were desegregated, if access to education and training was equal and if job-protected maternity pay was generalized, not much encouragement for female entrepreneurs can exist without affordable child-care and pre-school facilities.[n]

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[h] Carl Liedholm and Donald Mead, "Small scale industries in developing countries: empirical evidence and policy implications" (Washington, DC, U.S. Agency for International Development, 1987); Marilyn Carr, "Women in small-scale industries -- some lessons from Africa", Small Enterprise Development, No. 1 (1990).

[i] Willian J. House, "The nature and determinants of socioeconomic inequality among peasant households in Southern Sudan", World Development, No. 7 (1991).

[j] "The integration of women in industrial development: UNIDO policy and field operations in the small- and medium-scale industry sector" (Vienna: Working Paper No. VI, UNIDO, 4 September 1990).

[k] "Informal sector and urban employment--a review of activities on the urban informal sector" (Geneva: International Labour Office, 1990).

[l] Charlotte Taylor, Women and the business game: strategies for succesful ownerhip (New York, Cornerstone Library, 1980), p. 16.

[m] Pat B. Alcorn, Success and survival in the family-owned business (New York, McGraw-Hill, 1982).

[n] This "competitive disadvantage" is illustrated by the fact that in the United States, for instance, women aged 21 earn on average 90 per cent of the male wage, while by the time they are 35, working full-time with two children, their earnings are down to 46 per cent of the average male wage (see Sylvia Ann Hewlett, "The "price" of motherhood", Financial Times, 26-27 October 1991). Outside the extended family, the provision of these services is largely confined to middle and upper

Public laws, government regulations and institutional policies reinforce socio-cultural norms and attitudes. Some countries discourage dual wage-earner families through tax policy; others restrict the occupations a woman can enter, her ownership in a business, her right to join a trade union, her ability to borrow or lend without permission of husband or father, and there are still countries that do not allow women to vote or to drive a vehicle.[o]

Today women are better educated than ever before. Yet the progress they have made in the corporate world has been far slower. Studies of sex-role and socialization indicate that young women are steered away from non-traditional fields very early. There are many indications that the attitude of girls towards science and technology is established at a very early age.[p] Girls have already narrowed their possible career choices to female-dominated fields by the time they leave elementary school. Traditional education, with differential emphasis on technical career options, sex stereotyping and unequal access to training schemes, and child-raising patterns rather discourage women to think of entrepreneurial activities as a viable path. There is need to increase the awareness of school children about a variety of technical career options, to reduce sex stereotyping in schools and to provide equal access to training schemes.

Occupational segregation of women in the labour market is another barrier to potential female entrepreneurs. Lack of employment opportunities for women in certain professions or occupations means that important avenues to training and experience are blocked to them. Occupational segregation and low income have a cumulative effect, limiting the access of women to credit and equity through savings.[q]

Several studies in developing countries report that women entrepreneurs regard their major business problem as not being able to obtain adequate financing for their operations.[r] So do men, but socio-cultural norms may further restrict the access of women to credit. It may be considered inappropriate, for instance, for a woman to travel alone between her home in a rural area and the financial institutions in town. In many rural areas of developing countries a high proportion of women are de facto heads of household, as male migration to urban areas in search of employment leave them managing their farms alone, and thus the above-mentioned constraints inhibit efficient use of farm resources.

When formal financial institutions fail to meet their need for capital, women turn to informal sources. The need to rely on informal networks for start-up capital and initial loans may put women at a disadvantage. Women are often barred from local male organizations, such as agricultural cooperatives or social clubs through which information regarding sources of credit and application procedures can be obtained and where many contacts for arranging informal financing are made.

Various NGOs and financial institutions provide example on how to assist women entrepreneurs. Women's World Banking (WWB) encourages entrepreneurial women in any country to join as WWB affiliates and their loan guarantee programme provides first-time credit. Another example is the Grameen Bank in Bangladesh, which lends in particular to landless and assetless people.[s] Today this bank serves one million borrowers, 92 per cent women. The repayment rate is over 98 per cent.

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income countries. However, even in these cases provision varies tremendously.

[o] The United Nations Convention on the Elimination of all Forms of Discrimination against Women establishes norms for the countries acceding to it and principles to foster awareness among countries that are not parties to it. At present, 111 states ratified or acceded to the Convention. Equality, however, will be attained only when States convert the principles of the Convention into national policy and practice.

[p] Ingrid Granstam, "Girls and women in science and technology education", in Innovations in science and technology education, vol. II, edited by David Layton (Paris, UNESCO, 1990).

[q] See Richard Morse, "The capital gap" (paper presented to "Setting the research agenda: proceedings of the Bentley Small Business Conference", Waltham, MA. Bentley College, 1981).

[r] Margaret Lycette and Karen White, "Improving women's access to credit in Latin America and the Caribbean: policy and project recommendations", in Women's Ventures, edited by Marguerite Berger and Mayra Buvinic (West Hartford, CO, Kumarian Press Inc., 1989).

[s] Marguerite Berger and Mayra Buvinic, eds., op. cit.; Muhammed Yunus, "Credit and the informal sector: the experience of the Grameen Bank" (paper presented at the "Consultation on the Economic Advancement of Rural Women in Asia and the Pacific", jointly organized by IFAD and APDC. Kuala Lumpur, Malaysia, 15-21 September 1991).

Education and entrepreneurship

Entrepreneurship through experimenting with new ideas and the continual upgrading of existing products and processes implies a learning process and a high level of general education. The starting point in training modern entrepreneurs is a national education system that can accommodate not only scientific and managerial personnel, but also the labour force at all levels. It must also provide continuous opportunities for retraining and the upgrading of acquired skills and knowledge. In most successful countries the state plays a major role in supporting and financing national education and basic research. However, and as the case of the "star" industrial performers of South-east Asia demonstrates, inherited high levels of formal education at the outset of rapid development is not enough unless there exists the capacity to continuously upgrade and restructure the educational system towards tertiary and technical training as the development process advances.[21]

Many business skills (such as accounting, statistics, information gathering and economic analysis) are certainly helpful in launching new ventures and relatively easy to acquire. The entrepreneur himself need not possess those skills, but in that case they should be available for hire within the economy.

Would-be entrepreneurs exhibit certain attitudes: imagination, initiative and creativity, urge for independence, high self-confidence, risk-taking, perseverance or readiness to hard work and often sacrifice present pleasures and comforts for uncertain future rewards. Success depends on individual combinations of these and other elements permitting departure from standard practices, rapid recognition of new opportunities and innovative approaches to take advantage of them. Entrepreneurial talents crucial for success are often unique or experience-based and, as such, difficult to teach and acquire. But attempts to introduce motivational training aimed at changing attitudes towards innovation, active search for improvements and persistence in acquiring a competitive edge are being launched. Other channels for educating entrepreneurs are courses on venture entrepreneurship, including opportunity identification, product development, venture planning and financing. Emulating business-school programmes in advanced economies deserves to be encouraged.[22] In addition, educational support is an important channel through which to reach and encourage entrepreneurship among minority groups and the small enterprises in the informal sector.[23]

The complex and cumulative nature of contemporary technical progress, as well as the amount and quality of information and knowledge required to innovate, make modern entrepreneurship more of a collective effort than that of an individual one. The rapid diffusion of innovations means that this team effort is not a unique act of risk and courage but a continuous learning process. Consequently, appropriate educational processes must be grounded at the firm level and training programmes established with the support of both private and public funds. The strategies of reverse engineering favoured by some South-east

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[21] The evidence is reviewed in greater detail in Sanjaya Lall and G. Kell, "Industrial development in developing countries and the role of government interventions", in Banca Nazionale del Lavoro Quarterly Review, No. 17 (1991), pp. 271-292.

[22] See W. Ed McMullan. "Entrepreneurial support system: an emerging scientific frontier", Journal of Development Planning, No. 18 (1988), pp. 53-61.

[23] See J.Boomgard, S.Davies, S.Haggblade and D.Mead, "A subsector approach to small enterprise promotion and research", World Development, No. 2 (1992), pp. 199-212.

Asian economies deserve more careful consideration in transforming countries, and the value of engineering courses and industrial design given particular attention. Moreover, university-based entrepreneurship has underpinned the development of new technology-based firms.

This changing character of entrepreneurship goes some way to reversing the roles of talent and education. The new team concept increases the demand for workers and executives who are able to cooperate in initiating and keeping up with small adjustments necessary to improve everyday routine operations of their companies and to continually upgrade products and technologies. Better-than-average abilities of workers and executives are crucial for innovating processes in most successful countries. In this situation, much more can and should be done in education for entrepreneurship.

Technology policy and entrepreneurship

The contribution of technological change to longer-term economic prosperity is widely accepted. However, there is disagreement about which institutional conditions and policy measures best encourage its rapid development. To encourage individual producers to commit resources to an uncertain future without seriously curtailing the benefits of a more widely available product requires a complex incentive system and a diversity of public and private institutional support.[24]

R&D has a central place in any national system of entrepreneurship. For the enterprise, R&D involves a long-term commitment of resources with uncertain returns. Under these conditions, there are considerable barriers to investing in R&D. The difficulties facing private enterprise in this regard, resulting in both underinvestment in R&D and duplication of existing research, has provided a strong reason for government-supported R&D in market economies. Governments have themselves directly committed resources to R&D, including for research, and have reaped commercial benefits from their investment and indirectly provided support through university research and training, government agencies and their procurement policies.

However, R&D is not an exclusive responsibility of government. Indeed, in most countries the bulk of research is carried out by private firms, including through collaborative research and market-based transactions. There are sound economic reasons why private firms should acquire capabilities in R&D, despite the risks, once it is recognized that technology is not off-the-shelf. First-mover advantages, and learning and reputation effects, place firms in a position to recognize, adopt and market latest developments from a wide variety of sources. In particular, R&D establishes a culture of innovation that is increasingly important, given the incremental and imitative nature of much technological development.

Technology policy should be seen as a necessary complement to industrial restructuring and competition policy. To the extent that R&D represents a long-term investment subject to cost calculations, tax incentives and financial support can provide valuable encouragement to in-house R&D. However, successful enhancing of R&D requires competent private entrepreneurs supported by a strategic commitment from the state with

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[24] This conclusion has been emphasized in the extensive research of Richard Nelson (see "Incentives for Entrepreneurship and Supporting Institutions", in Economic Incentives, edited by B.Balassa, (London: Macmillan), pp. 173-187 and "Capitalism as an engine of progress", Research Policy, No. 19 (1990), pp. 193-214).

Box VII.4. R&D: the case for strategic intervention

A number of successful developing countries, particularly those in South-east Asia, have invested heavily in R&D from both private and public sources. In this respect, the case of the Republic of Korea stands out with 2.3 per cent of GNP spent on R&D in the late 1980s, a figure higher than that of a number of OECD countries. The bulk of R&D is carried out by the large private companies known as chaebol and has a strong industrial bias. In addition, the commitment of these enterprises to the process of continuous upgrading does not stop with the formal efforts of R&D: since the 1960s they have been required to commit 5 per cent of sales to employee training. Both commitments establish strong capabilities at the enterprise level.

However, government policy has played a strategic role by openly supporting large-scale production units, encouraging investment in technologically sophisticated industries and restricting foreign direct investment. Fiscal incentives and the formation of an elaborate scientific and technical infrastructure have been central to industrial upgrading often closely tied to "priority sectors" or "promising sectors". In addition, firms have been forced to enter export markets at the earliest date and subsidies have declined as the more mature firms proved themselves on international markets.

In other developing countries where R&D expenditures have been high, such as Brazil, India and Mexico, too little has been concentrated in the productive sector and the linkages between the public producers and private users of R&D have been poorly developed.

a view to fostering a longer-term vision of development (see Box VII.4).

Although foreign direct investment provides rapid access to skills, technology and international linkages and is a powerful surrogate for missing endogenous capabilities, caution is warranted given the pervasive conditions of asymmetric information and the large potential for opportunistic behaviour. Efforts should be made to establish domestic linkages in order to avoid becoming a passive recipient of technology, thereby restricting growth and undermining domestic capabilities. The experiences of the South-east Asian countries should be helpful in this respect. Theirs has been a highly selective approach to openness with the State playing a critical role as "selector" or "facilitator", aiming in the end at advancing cumulative progress towards widening existing domestic capabilities. In most cases the host country will be a passive recipient of entrepreneurial activity rather than its initiator. Appropriate measures are required including the participation of local engineers and designers, information and bargaining support and methods to foster reverse engineering. More selectively, support for the basic and applied sciences must be accompanied by access for firms to higher education. The technological needs of small and medium-sized firms calls for particular attention to be paid to their appropriate enabling environment (see Box VII.5).

The possible benefits from a well-constructed technology policy are great. However, the appropriate measures must be selective and provide necessary safeguards that do not permit uneconomic or unnecessarily lengthy support. Such concerns readily extend to policies in support of industrial investment and the burden of retraining or relocating workers in declining sectors. The need to ensure the flexible response of all factors of production to the changing opportunities associated with productive entrepreneurship must be a paramount concern of policy makers in its dialogue with the private sector.

Box VII.5. Technology parks, incubators and industrial estates

Technology parks, incubators, and industrial estates all try to meet the needs of enterprises by concentrating support services in one location. Technology parks target high-technology enterprises, often in specific industries that are the focus of publicly supported promotional programmes and are connected with nearby academic and research institutions. Incubators are designed to provide transitional assistance to start up enterprises. They are not typically focused on any one industry. Industrial estates, public and private, provide key elements of infrastructure, such as land and utilities, training and common production facilities. Although industrial estates were typically part of earlier enterprise-promotion efforts, their importance has decreased in recent years. As with credit, industrial estates are increasingly expected to be self-financing, unlike incubators and technology parks. Any of these types of facilities may be combined with export-promotion zones, which also benefit from particularly favorable tax and regulatory regimes designed to promote exports.

While governments can play an important role in promoting incubators and technology parks, their bureaucratic style is frequently not appropriate. An incubator or technology park is itself an entrepreneurial venture that must be flexible, changing rapidly to keep up with the pace of shifts in technologies and markets. More and more of these facilities are therefore being launched either in the private sector, or as joint private and public sector efforts on private initiative.

In country after country, it has been possible to create a supportive mini-environment for high-technology, high value-added enterprises through planned coordination of R&D, training, prototype production and commercial production in a single technology park. The renewed focus on technology as the cornerstone of development policies, especially in Asia and the East, almost guarantees that the number of technology parks and incubators will grow.

Entrepreneurship in developing countries

The period between 1950-1973 was a golden age of economic development for the global economy with growth in real income per capita faster than ever previously recorded. Among the developing countries growth was most rapid in Asia and slowest for the African countries. The Latin American economies fell somewhere in between. However, all the regions showed considerable variation at the national level. This was particularly marked in Asia where rapid industrialization in some countries contrasted with the cumulative problems of recent decolonization and weak rural economies. Such variety reflected inherited economic, political and cultural legacies, variations in policy performance and the ability to forge new institutions capable of providing solutions to the development problems of a new age.

The emergence and influence of an entrepreneurial class reflected these differences. In many countries the perceived absence of prerequisites for private sector development encouraged the state to take an entrepreneurial role, which became extensive in a number of economies, particularly in Africa. Similar considerations led many economies to protect their domestic markets in the hope of encouraging fledgling enterprises and building their industrial base. In only a few economies did a powerful national elite establish a strategy of domestic saving and investment in both the physical and human capital, thereby creating conditions for export-led growth, which benefitted from expanding global trade. The newly industrializing economies of South-east Asia typified the latter strategy. By comparison, the acute economic distortions of colonial structures in Africa were compounded by the weak or inappropriate economic linkages constructed by the newly independent states, which acquired economic responsibilities that, in many cases, far exceeded their managerial abilities and disposable resources. The fledgling national entrepreneurs who emerged under these conditions were only partially successful in building a modern economic base. Under these circumstances, considerable resources have remained in the agrarian sector or were directed to the informal sector.

In the immediate post-oil shock period after 1973, developing countries with energy resources and others able to obtain access to recycled petro-dollars were in a position to overcome some of the financial constraints on development. However, cumulative debt problems in Latin America and Africa, aggravated by the decline in prices of primary commodities, which remain the major export earner in many countries, rapidly spilled over into domestic macroeconomic imbalances. The subsequent tightening of monetary and fiscal policies and the realignment of currencies put considerable pressure on domestic entrepreneurs. But privatization and liberalization embraced in recent years have offered new opportunities for the private sector. Growth has revived, though not returned to pre-1973 levels, unemployment has been difficult to reduce and income inequalities have widened. In this context, interest has grown in new strategies to meet the development challenges of the next decade.

Considerable interest has been shown in the experience of successful Asian economies that have maintained respectable growth rates and in some cases even strengthened the pace of their economic expansion, while managing their macroeconomic situations in a manner that did not exacerbate income inequalities or their affordable debt-service obligations. Characteristic of these economies has been a more complementary relation between the private and public sector. This has allowed the state to intervene strategically in support of private entrepreneurship rather than as a surrogate. Consequently, the recent moves of these countries to expand the private sectors and further open their economies have not appeared as an abrupt break in policy and have not generated the difficult political problems typical of many other developing economies. The recent adoption of some of these measures by China will be watched with considerable interest by many developing economies, including those previously planned economies that have embarked on a transition to market economies. Under the current global conditions, the potential success of productive entrepreneurship transforming the world's most populous country offers a bright spot on an often dark horizon.

Entrepreneurship in developing countries - the case of Africa

Postwar growth was much slower in Africa than other developing-country regions and since independence, many African countries have experienced a gradual erosion in their linkages with the global economy without being able to substitute improved domestic or regional linkages. The effects of the global slow-down in growth after 1973 have been particularly marked. A growing sense of disillusion and frustration has been forcing a radical rethinking of development strategies on the continent and a transformation of existing structures and a fresh approach to policy seems to be required.

The enabling environment

The virtual absence of market institutions and adequate infrastructure to support the development process provided the rationale for state entrepreneurship in many post-colonial African economies. Consequently, although there is considerable variation across the continent, a number of African economies, notably Angola, Mozambique, Guinea, Senegal, Sudan, Tunisia and Zambia, have fostered large state sectors.

Evidence on the performance of state-owned enterprises is limited and equivocal. For example, in sub-Saharan Africa, notable examples of successful state enterprises include the Kenyan Tea Development Authority, the Ethiopian Telecommunications Authority, the Tanzanian Electricity Supply Company Limited and the Guma Valley Water Company of Sierra Leone.[25] However, in many cases the contribution of state enterprises to the government budget has been negative and the pressure to reform the state sector has grown.

Although privatization programmes have been adopted by many governments on the continent, concrete actions to date, with the exception of some West African countries, have been modest. Poorly defined legal structures, weak capital markets, the absence of skilled professionals and political disputes along ethnic or regional lines have all contributed to the disappointing pace of reform. Moreover, the strategic nature of many state-owned concerns has heightened resistance to greater foreign involvement in the privatization process in many countries. Needless to say, many of these obstacles will not be removed by simply transferring property rights.

Many of these obstacles have a particular bearing on entrepreneurship in agriculture which remains the dominant sector in a number of economies. Agricultural producers are often constrained in efficient production by insufficient access to land. Equally important to productive entrepreneurship, housing and office rentals are often distorted in urban areas because of monopoly controls and speculation. Likewise, inability to obtain needed space at affordable rates prevents enterprises from developing fixed locations, obtaining assets that could collateralize loans and having sufficient confidence to invest in expansion. African countries are interested in projects to help alleviate this constraint, for example, by conducting cadastral surveys and regularizing industrial settlements.

The credibility of reform is a particularly serious issue in the African context. Privatization should not become a means for reinforcing rent-seeking behaviour, through continued subsidies or inappropriate protection. Consequently, the effectiveness of privatization measures will be dependent on wider changes in the competitive and regulatory environment.

African governments have taken numerous steps in the recent past to improve the environment for the development of entrepreneurship. Economic stabilization and structural adjustment have aimed at creating the macroeconomic conditions required for entrepreneurship. To take advantage of the stabilization process, many African countries are now restructuring their economies with the assistance of various multilateral and bilateral donors. Twenty-four African countries were implementing economic adjustment programmes in July 1991, supported by IMF arrangements. Certainly, these more orthodox financial policies have reduced government expenditures and postponed the extension of credit by the banking system, thereby curtailing inflationary pressure. Moreover, by diminishing the privileges of certain enterprises and opening the market to others, they have increased the effectiveness of entry and exit pressures on enterprise performance. The intent is to enable the growth of those sectors that have previously been discriminated against but have entrepreneurial potential in more stable and open markets. On the other hand, these same policies have reduced incomes and thus market purchasing power. Freeing prices, particularly of inputs, has put additional pressure on some entrepreneurial activities, particularly those lacking access to credit, whose longer-term potential is not fully reflected in their immediate financial position.

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[25] World Bank Development Report 1983, (New York: Oxford University Press), pp. 78-85 and D. Luke, "The economic and financial crisis facing African public enterprises", Public Enterprise, No. 2 (1988), pp.

The effects have been most visible in the formal sector and on larger enterprises. However, the consequences for smaller firms are particularly salient because African economies differ most from other economies in the prominence of the informal sector. Unregistered, unlicensed and sometimes illegal activity often plays a predominant role in employment generation and aggregate output. This is particularly true in the agricultural sector, where informal activity routinely accounts for at least 75 per cent of employment and 40 per cent of GDP. The informal sector is also responsible for a large part of manufacturing and service industries. Some estimates suggest that perhaps a quarter of the Ghanaian work force is employed in informal manufacturing and services, usually commercial trade or food-processing and that one third of GDP in Niger derives from informal sector mining, manufacturing and services.

The positive effects of structural adjustment measures on the informal sector come from the reduction in uncertainty and pressure for payoffs and regulation and in easy access to goods at market clearing prices. Every indication is that the last of these is most important. Because regulation per se is often avoided by informal firms, access rather than price is the key obstacle to small informal enterprise. In Ghana, when foreign exchange was permitted to find its equilibrium market price, larger, formal sector enterprises reduced their use of imported inputs. Smaller enterprises which were already paying black market prices, were able to save on import costs and increased their imported inputs.[26] In general, however, the greater adjustment was not on the input but the output side. More entrepreneurial firms, especially those recently formed, developed new products, moved into customized products, or found market niches and prospered. In comparative terms, the informal sector flourishes. According to a World Bank model, employment in the informal sector of Africa will increase 6 per cent annually from 1990 to 2020.[27]

However, the positive factors must be weighed against the negative consequences of structural adjustment on small and informal sector entrepreneurs. These include the loss of the advantages obtained on the black market under previous policies that rationed foreign exchange (such as a decline in cheap, smuggled spare parts used by small repair shops); increased prices of imported and domestic raw materials and inputs due to price liberalization and inflation; the breakdown of previous supplier and customer credit arrangements resulting from severe shortages of working capital; falling real incomes and depressed purchasing power among low income groups, who are their major customers; and excessive competition among small producers with falling profit margins and fewer orders per enterprise due to large numbers of new entrants.

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[26] William F. Steel and Leila M. Webster, Small Enterprise under Adjustment in Ghana (Washington, D.C., World Bank, 1991).

[27] K. Marsden, African Entrepreneurs: Pioneers of Development (Washington D.C., International Finance Corporation, 1990).

In light of these potential problems, a number of targeted efforts in structural adjustment have focused directly on the informal sector. Licensing and land-use requirements have been reduced, programmes to provide training and finance to the informal sector introduced, often in collaboration with business associations - all designed to reduce the costs of doing business. In 1973, the Kenyan Government legalized private minibuses, or "mutatus". Today there are roughly 30,000 mutatus that provide the key transportation service for low income and commercial districts.

Although the public sector is still dominant, the importance of the private sector in generating economic wealth has increased since the mid-1980s, as African economies have liberalized their policies and promoted entrepreneurial development. However, despite rising productivity, the African private sector is not always able to compete effectively in a liberalized trade regime. Many formal sector firms, need to break with practices acquired under protected markets, discriminatory and rent-seeking administrative procedures and controlled banking practices.

Financial intermediation and entrepreneurship

In most countries, lack of credit is reported as the main problem facing small entrepreneurs. Informal and small-scale formal entrepreneurs rarely have access to formal sector credit. Nevertheless, informal entrepreneurs (often women) represent a valuable segment with proven ability to service debt in a timely manner and pay fees for non-credit bank services. Thus, a key structural challenge facing Africa's banking entrepreneurs is a re-examination of credit risk assessment and allocation procedures in the formal banking sector, as well as promotion of incentives to encourage the mobilization of capital from banks to serve this dynamic segment of the economy.

The majority of smaller enterprises in African countries, except the very smallest, want credit but are unable to get it. One recent survey conducted in Kenya indicated that 66 per cent of private sector firms believed that lack of credit was an important constraint. Similarly, 41 to 45 per cent of small, medium-sized and large enterprises in Kenya claimed that high taxes and government regulations in general slowed enterprise growth.[28] In Ghana, more than 50 per cent of private sector entrepreneurs believed that lack of credit and aggressive tax collection were serious constraints. Small enterprises report that up to 50 per cent of their capacity is idle because of a shortage of working capital.

Bankers generally complain that small-scale entrepreneurs lack collateral or equity. Although some of these entrepreneurs become good bank customers, many cannot get loans because their net worth or asset base is too small for banks to satisfy their requests. However, it is not only that African enterprises are not able to fulfill the banks' formal requirements. Arrears in current credit programmes are high. The World Bank reports a figure as high as 39 per cent in the programmes it has funded in Africa.

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[28] Kenya: Private Sector Diagnostic Survey (Cambridge, MA.: J.E. Austin Associates, October 1989).

Despite these difficulties, some institutionalized finance to small enterprise development continues in a number of countries. Countries in which the banking system has either ceased to lend or never lent to small enterprises need to build up a system for small enterprise lending. Directed and preferential lines of credit have been provided through banks and non-governmental organizations (NGOs). Despite controversy on how valuable these programmes are for the smallest units, they are considered critical for the transformation of smaller units into larger ones.

Perhaps one of the major changes occurring in Africa today is renewed emphasis by banks on project cash-flow generation as a measure of repayment prospects. This is contrary to prevailing methods of credit allocation in earlier decades that focused on development needs without prudent controls and collection methods. This cash-flow approach is being adopted in many African countries undertaking structural adjustment programmes. Because these reforms are so recent, it is difficult to evaluate results, especially because the volume of credit has been low in recent years because of monetary policy constraints.

Apart from the commercial banking system, there has been a great deal of experimentation using mutual savings and loan societies and credit unions. These semiformal financial institutions have shown mixed success when they have concentrated on credit extension rather than on savings mobilization. Successful ventures include a project in Togo, where credit unions rank as one of the leading financial institutions in consolidated assets and where earning assets (loans) are more current and are serviced more punctually than in the commercial banking system. Various efforts to copy the Grameen Bank's microcredit approach have also been undertaken by the Association pour la Productivité in Burkina Faso and the Mudzi Fund in Malawi with a focus on funding the enterprises of the poorest segments of society.

Of course, credit institutions are only one part of the financial market - capital markets and other financial institutions have been developed in those African countries with an adequate size and sophistication. Formal stock exchanges are operating in a number of countries but at a very low level. Informal markets, though not as extensive as Latin America, continue to play some role in financing informal sector enterprises and rotating credit arrangements continue to be important mechanisms for savings mobilization.

Education, training and entrepreneurship

The educational infrastructure remains a significant barrier to entrepreneurship. Literacy rates are substantially below those in other developing countries and secondary and particularly tertiary education is at a very low level. For example, in the mid-1980s, Kenya had only 1 per cent of the relevant age group enrolled in tertiary education and 20 per cent in secondary education. Arguably, this low level of human capital development is the most binding constraint on entrepreneurship in Africa.

The problems are exaggerated by the weak linkages between education and industry. Levels of technical and vocational training are particularly low, with the partial exception of some North African economies such as Egypt and Tunisia. Employees lack training and skills. The problem is exacerbated by the poor management of the available labour and inadequate entrepreneurial skills.

This problem has been recognized by African countries. Considerable effort has gone into expanding training, both in management skills and entrepreneurial orientation. The International Labour Organisation has assisted programmes in almost every country in Africa, including assessments of and training in the vast informal sector of the African economy. Considerable training occurs at the school level. Several regional management training institutes provide graduate business management and public administrative training. There are also private-sector management training institutions, such as management training advisory centers (MTAC) in Kenya and Uganda. Small-scale entrepreneurship training with a focus on psychological orientation such as the programme in Ghana, which was influenced by the National Institute for Entrepreneurship and Small Business Development (NIESBUD) of India and assisted by the World Bank, has also been conducted. NGOs also promote training in small-scale entrepreneurship, such as CARE's technical assistance and credit training programme in Niger, and Technoserve's grass-roots cooperative programmes in Ghana, Kenya, Rwanda, the Sudan, Tanzania and Zaire. All of these programmes are designed to address important issues affecting enterprises in procurement, production, processing, marketing and finance.

Technology policy and entrepreneurship

Technology transfer is particularly difficult in Africa not because of the sophistication or cost of the technologies needed, but because of a lack of absorptive capacity. Technology transfer requires skilled technical manpower to assess, acquire, adopt and assimilate transferred technologies. In their absence inappropriate technology will be acquired at excessive cost, inadequately modified to fit the environment and poorly assimilated. As soon as the vendors leave, the technology is likely to become inoperable. In light of this, the failure of most African economies to devote adequate resources to R&D stands out as a major obstacle to productive entrepreneurship. Greater commitment to technical education and the construction of research laboratories required to produce the kind of technostructure to manage technology transfer is urgently required.

Most countries have received assistance from donors and NGOs to assist with technology transfer units and the development of appropriate technology. In a number of countries, particularly Kenya, Tanzania and Zambia, technical cooperation grants have become an important component of gross domestic investment. The assistance is intended to provide low-cost, low-maintenance equipment for agricultural production and processing and cost containment in manufacturing. These approaches are also meant to alleviate the dual problems of spare parts availability and production stoppages resulting from lack of power, materials, technical know-how and financial requirements to sustain large-scale operations.

An alternative source of access to the required technology and capabilities is foreign direct investment. With the exception of Egypt and Nigeria, African economies have not yet been successful in attracting foreign direct investment. Net foreign direct investment in Africa peaked at nearly $4.3 billion in 1989, of which $3.7 billion (86 per cent) went to Egypt and Nigeria. From 1985 through 1989, these two countries alone attracted $9.8 billion (85 per cent) of Africa's $11.6 billion in foreign direct investment. Africa's aggregate share represents approximately 16 per cent of global foreign direct investment. Thus, excluding Egypt and Nigeria from the calculation, the rest of Africa attracts less than $600 million in net foreign direct investment in any year, with the 1985-1989 average at $357 million, or 2.4 per cent of total foreign direct investment worldwide. Indeed, Africa's 1989 total of $590 million (excluding Egypt and Nigeria) is comparable to the figure for Turkey ($663 million), the Philippines ($563 million) or Colombia ($547 million) and significantly below that for Brazil, Malaysia or Mexico.

The small size of many domestic markets in Africa and limited linkages abroad, have prevented enterprises from taking advantage of economies of scale. The weakness of national cooperative movements has undercut one vehicle by which small-scale producers and distributors could have generated economic benefits characteristic of large enterprises. Business associations have also failed to provide needed services, though they are becoming more active and are a critical part of many new programmes.[29] Subcontracting has not proved popular and in agriculture it has been connected with the exploitative policies of state-owned enterprises. On the other hand, subcontracting with informal enterprises in the cities is increasing. Informal market networks already exist between entrepreneurs and are important sources of marketing and product ideas. Measures to encourage more formal networks are likely to be an important ingredient of entrepreneurial development in Africa over the coming decade.

Entrepreneurship in developing countries - the case of Asia

A small group of Asian countries have now experienced rapid and sustained growth for a number of decades. The notable performance of Hong Kong, Singapore, the Republic of Korea and Taiwan Province of China continued in the 1980s during a period of rapid structural adjustment and these were joined by a group of newly industrializing economies, including the People's Republic of China, that embarked on their own rapid growth paths. In all cases an expanding private sector has created a market environment supportive of entrepreneurship, investment and development. In most Asian countries, with the exception of Hong Kong, Malaysia and Singapore, the role of private foreign capital in the ongoing promotion of new enterprises has been relatively low and entrepreneurial development has been fostered by endogenous forces, often with a substantial involvement on the part of the State. Although larger enterprises and the state will continue to play an important entrepreneurial role in the region, significant changes in the place of both in the development process are currently taking place.

The enabling environment

Two models of entrepreneurial development have existed in Asia: a comprehensive model, such as in India, and a strategic model, which is more common in South-east Asia. In the comprehensive model, the primary responsibility for enterprise promotion rests with government bodies. Progressively, business associations and joint private-public sector bodies assume a greater promotional role, and there is an increasing role for larger enterprises that subcontract with smaller ones. However, since the fall of 1991, the Indian model is undergoing a radical change and may lose many of its comprehensive features.

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[29] Samuel Paul, Private Sector Assessment: A Pilot Excercise in Ghana (Washington D.C.: World Bank, May 1989).

In the 1990s, the development of entrepreneurship in the region's formerly centrally planned economies, such as Cambodia, China, Laos, Mongolia and Viet Nam, will be of particular interest. All of these countries have undertaken major initiatives over the last decade to encourage private entrepreneurs, as well as entrepreneurs in the public sectors. In China there has been special focus on rural industries.

During the 1980s, Asia experienced a rapid increase in production that was based on a high level of small-scale entrepreneurial activity. In a large number of Asian countries, small and medium-sized enterprises account for more than 90 per cent of the total number of enterprises and a high percentage of production and employment. They account for 22 per cent of value added in Singapore, over 30 per cent in the Republic of Korea and over 50 per cent in Thailand. Small firms have grown rapidly and compared with other regions, Asia has the largest number of small firms and many promise to grow into large ones.[30]

Most Asian countries have institutionalized their small-scale enterprise promotion and the orientation of entrepreneurs. Entrepreneurship development is the sole responsibility of some institutions, such as NIESBUD in New Delhi, the Entrepreneurship Development Institute of India (EDII) in Ahmedabad, the Institute for Small-Scale Industry of the University of the Philippines, the Majlis Amanat Rakyat (MARA) programmes in Malaysia, the Bangladesh Small-Scale and Cottage Industries Corporation and the Industrial Development Bank in Sri Lanka. In addition, a large number of institutions, such as the Technical Consultancy Organizations (TCOs) of India and the Korea Credit Guarantee Fund, include entrepreneurship among their other functions, such as management training and consultancy or provision of financial services.

Concern over high levels of unemployment and poverty has led to private and public efforts to promote micro-enterprise activity. Asia has been the locus of successful microcredit programmes such as the Grameen Bank of Bangladesh, the Integrated Rural Development Programme (IRDP) in India, the General Village Credit Programme of the Bank Rakyat Indonesia (KUPEDES) and the activities modeled after the Badan Kredit Kecamatan (BKK) in Indonesia.

The growth of small firms has reinforced the shrinking of the public sector in many Asian economies. However, the task facing the formerly centrally planned economies of Cambodia, China, Laos, Mongolia and Viet Nam differs considerably from that in Thailand or Hong Kong where the state sector has never acquired extensive economic responsibilities. In India, where public enterprises have received considerable protection from competitive pressures and have often been burdened with social welfare responsibilities, the tasks of restructuring are likely to prove more intractable than in the Republic of Korea or Taiwan Province of China which have developed efficient public sectors to complement export-led growth.

Although privatization schemes are being introduced in a large number of economies, the main motivation has been pragmatic, leading to case-by-case approach, rather than political and ideological pressure for ownership change. This has been the case with the South-east Asian economies whose rapid growth coincided with a managed expansion of state-owned enterprises. Thus Singapore, with one of the largest and financially most solvent state sectors in the region, has employed privatization in a strategic effort to expand the private sector where appropriate.

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[30] C. Liedholm, "Small and micro enterprise dynamics and the evolving role of finance" (paper prepared for the Conference on "Small and Micro Scale Enterprise Promotion in a Changing Polish Environment: A Special Focus on Africa", The Hague, 30 September - 2 October 1991).

The performance of public-sector enterprises has also been improved through upgraded management techniques, reduction of state subsidies, and lifting of price controls. State enterprises in Singapore and Taiwan Province of China have been forced to meet the same market tests as private ones. Efforts to improve the management of state enterprises in China and Viet Nam seem to have been less successful.

As in other developing countries, privatization has been slowed by poorly defined legal structures and political or ideological opposition. The adverse consequences of a weak regulatory environment for private economic activity have been demonstrated in the case of Bangladesh and ethnic considerations are important in the reform process in Indonesia and Malaysia. In many countries the fear is that privatization will further rent-seeking behaviour by the political elite.

Although the continent has continued to emphasize export-led growth, some of the newly industrializing economies have recently lost part of their export competitiveness owing to labour scarcity and a rise in domestic wages. This has led to a process of relocating labour-intensive manufacturing from higher- to lower-wage countries which has gained particular momentum in Hong Kong and Taiwan Province of China. China now receives about two thirds of Hong Kong's investment. Some relocation has occurred in the countries of South Asia, several of which still have significant restrictions on foreign investment. Combining such relocation with upgrading the domestic industrial and technological base, while not always easy, has been pursued with considerable success in the Republic of Korea and Taiwan Province of China.

As a result of structural reforms in the 1980s, South-east and East Asian countries have continued to develop sound economic environments that foster entrepreneurial development in industry and export competitiveness. Import barriers have been lowered in many countries and incentives offered for foreign direct investment.[31]

The countries of the region have supported intensive educational and production-oriented R&D to assist the development of high-technology enterprises. Some countries find conscious that their educational system still focuses too much on the humanities and preparation for civil service careers and are moving to increase its technological content. They have facilitated joint ventures and the use of technical personnel from abroad as needed. They have provided finance for high-technology ventures, particularly in the Republic of Korea, Taiwan Province of China and Singapore. Some countries like Indonesia and Thailand have regional and sectoral imbalances in human resource development which they are addressing on a priority basis.

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[31] See Chapter III of this Survey.

Financial intermediation and entrepreneurship

Many Asian banks were initially nationalized to manage credit flows, but governments have recently moved to privatize them as part of the general pattern of credit reform. An element of state direction will almost certainly remain.

Financial reforms in support of entrepreneurship are underway in countries as varied as Bangladesh, Indonesia, Sri Lanka and Thailand. Foreign and private banks have expanded their operations, decontrolled interest rates and lending In formerly centrally planned economies, such as China, Laos and Viet Nam, a decentralized and diversified banking system is being built and financial instruments and markets are being developed. There has been a dramatic growth in stock and other institutions, and a more competitive atmosphere in financial markets has taken hold.

Most countries have development finance institutions. Many are in the public sector, but there are also some successful initiatives in the private sector in South and East Asia, as well as very active capital markets. The World Bank provided more than $1 billion in Asia over the 1973-1989 period to small enterprises alone, primarily through these development finance institutions. The government has provided guidance to the banks and development finance institutions in credit allocation, with special provisions for agriculture, small enterprises and other new ventures. By these means, India and Malaysia, for example, have succeeded in directing roughly 20 per cent of their commercial bank credit to small enterprises. The Philippines and Indonesia have now issued a mandate for a similar percentage. The Republic of Korea has achieved a similar result by creating specialized banks, such as the Industrial Development Bank of Korea. Considerable support has been forthcoming from international sources.

Leasing companies, factoring, small-deposit gatherers and other types of financial institutions have grown rapidly. In some cases, prudential regulation has not been able to keep pace with the creativeness of the market, and short-term reverses have been experienced. Some countries such as the Republic of Korea have resisted the trend towards private financial institutions. None the less, the norm in a number of Asian developing countries has been rapid financial development through the introduction and popularization of new financial instruments.

Many countries have mandated concessional interest rates and repayment terms for new enterprises and tolerated high levels of arrears. Much of the lending to the very smallest enterprises in India, for example, has been under the Differential Rate of Interest scheme at 4 per cent a year; the rate for other enterprises has been closer to commercial terms in recent years. Malaysian loans to small enterprises are kept at less than 9 per cent per annum. In addition, many of the governments operate guarantee schemes for small enterprise and export-connected loans to encourage bank lending to small and medium-sized firms. The Credit Guarantee Fund programme of the Republic of Korea has been quite successful. It has, in fact, been given credit for some of the country's success in export promotion, as well as small enterprise growth. Like the Malaysian guarantee programme, but unlike that in India, the guarantee is used for a small proportion of total loans, where collateral is deemed to be inadequate. Although some of these special facilities are likely to remain, there has been a general drive to reduce the degree of concessionality in enterprise lending because of fears that "cheap credit" was undercutting the sustainability of the financial system. An analogous problem exists in former planned economies with arrearages mostly from enterprises in the public sector. In East Asia, where banks are typically privately owned, concessional lending was never as extensive, and overdue loans have never been a major problem.

In recent years the relative role of capital markets has increased considerably. Asia has been the location of some of the largest "emerging stock markets", and in countries such as Malaysia, Singapore, Taiwan Province of China and Thailand, these markets have been the focus of a great deal of overseas investor interest, especially through mutual funds. Even in India and other countries where access to the stock markets has been limited to nationals, they have boomed.

Education, training and entrepreneurship

Asian countries have, in general, invested heavily in education at all levels, but especially in tertiary and technical education. The commitment of the Republic of Korea and Taiwan Province of China stand out in this regard. Both have impressive records on vocational training provided through the state and at the enterprise level, often in close collaboration with each other. The extensive nature of Asian education and high levels of literacy both facilitate the move into high technology and explain the generally greater income equality in the Asian region.

In poorer countries, however, such as Bangladesh, India and Pakistan, most of this investment is on government account and provision at all levels remains low. Lack of expertise and skill, both generally and in entrepreneurship, is still recognized as a major obstacle to enterprise. Extensive training programmes are operated at all levels in the Asian region, drawing on enterprise-promotion organizations, vocational training programmes and business schools and colleges. Internationally reputable institutes have emerged, such as the various Indian Institutes of Management and the Asian Institute of Management in Manila.

Asia is also the region that has the most extensive entrepreneurial orientation programmes, which have been key elements in the comprehensive programmes of entrepreneurial development, particularly in India. The Entrepreneurship Development Institute of India conducts courses with a strong orientation focus, combined with assistance in preparing and launching new projects. In Malaysia, where government policy aims at promoting entrepreneurship among ethnic Malaysians (bumiputras), these orientation courses have been conducted by the Majlis Amanat Rakyat (MARA), a special development organization for the bumiputras. From 1960 to 1988 MARA conducted courses for more than 160,000 bumiputras. MARA requires entrepreneurship courses of all students including those taking diplomas in its various technical courses.

Other types of entrepreneurial training have been developed by the Small Business Promotion Project sponsored by the German Technical Cooperation in Nepal, and widely duplicated elsewhere. Management Services has been promoting another model with the support of the United Nations. However, business schools in Asia have been slower to establish entrepreneurial curriculums than have their counterparts in the industrialized countries or Latin America. As elsewhere, studies of entrepreneurial training programmes, especially in India, Bangladesh and Malaysia, show positive results - although it is often difficult to separate the entrepreneurial training programmes from other elements of the promotional package in attributing these results.

Although industrial consultancy was pioneered in Asia by the Small Industry Service Centres in India and the Singapore Light Industries Service and is continued by programmes supported by both government and industry, the pace of expansion of government programmes has lessened. For-profit consultancy and training have grown in the more rapidly developing countries. Many others that receive external support clearly do valuable work as well, for example the Technical Consultancy Organizations (TCOs) in India, supported by the banks to serve ailing or fledgling firms.

Technology policy and entrepreneurship

High priority is placed on the development of entrepreneurship capable of leading growth in technology-intensive development strategies of the newly industrializing economies as well as in some other countries.[32] Government spending on research in higher education and public research institutes support an environment of learning and knowledge production and serve as the breeding ground for entrepreneurs and start-up companies. The contribution of expenditure on R&D and higher education to the growth of technology-intensive enterprises is contingent upon close linkages between research institutions and private industry. Thus in Taiwan Province of China professors can serve as consultants to private industry and personnel exchanges are accepted between public institutions and private sectors. In addition, direct government investment in high-risk advanced technology has helped diffuse such technology among private entrepreneurs. This has been particularly true in Singapore, the Republic of Korea and Taiwan Province of China where large R&D expenditures have been closely linked to their commercialization in the productive sector, but less so in India, despite its considerable investment in R&D.

In the Republic of Korea the government has in recent years given financial backing and technical support to facilitate technology transfer between research institutions and the industrial sector, with emphasis on promoting small and medium enterprises. China also encourages the flow of knowledge and expertise between academia and industry. Over the short period of a few years many new entrepreneurs have sprung from the academic and research community.

The governments of the newly industrializing economies have also been directly involved in creating research organizations to facilitate the transfer of technology. In the case of the Republic of Korea, ETRI (Electronics and Telecommunications Research Institute, a national research organization under the Ministry of Science and Technology) has established support for small and medium enterprises as one of its objectives to enhance their technical level and promote their competitive strength in the international market. In Taiwan Province of China, where there is a lack of focus and insufficient financing of R&D efforts among the many small enterprises, the government has invested in cooperative research institutes. The largest of these government-funded institutes is the Industrial Technology Research Institute, with an annual budget of over $150 million. It has a good record in the support of small firms, but it has yet to elevate the level of technology for civilian production to match that of the more advanced countries of the region.

Government investments have also been used in recent years to establish legally independent investment entities. They invest in R&D companies, give conditional interest-free loans (interest due if the R&D project is successful), facilitate joint research and offer R&D information services. In investing in R&D companies and facilitating joint research, particular emphasis is placed on partnership within the private sector and between private companies and public institutions. The technology resources (facilities as well as know-how) of public institutions are made available to the private sector at a very low cost.

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[32] This discussion draws on Liu Chining, "Promoting technology-intensive small enterprises through government R & D spending and establishment of high-tech parks: critical evaluation", paper presented at the United Nations Symposium on Entrepreneurship and Economic Development in Asia, New Delhi, India, 22-25 October 1991.

Recently Taiwan Province of China has taken this approach to create the Industrial Technology Investment Corporation, legally an independent entity but affiliated with the Industrial Technology Research Institute. China has initiated a similar programme. The "Torch Programme" under the State Science and Technology Commission is solely for the purpose of promoting entrepreneurship and commercialization of products from their research institutes and universities. It provides seed money as well as arrangements for favourable loans through the central bank.

The development of an infrastructure on which technology-intensive enterprises can flourish has also been a government priority. One form of such infrastructure is the technology park which has been accepted as an effective vehicle to advance high-technology. It is an organized concentration of technology-based enterprises in a defined geographic area located in close proximity to science and technology research facilities and with easy access to special services and plant facilities. One example of a high-tech park is the Hsinchu Science-Based Industrial Park in Taiwan Province of China. It is important to note that its success is attributable to the government's effort to ensure continued financing and highly efficient management.

Asian governments have also invested heavily in physical infrastructure. Power, roads, ports and telecommunication services have all been important. Recognizing the limitations on government funding, private roles have increased in all of these areas. Roads are being built by private consortia on a toll-paying basis, power generation is increasingly in private hands and telecommunication systems and airlines are being privatized.

Subcontracting can be an important tool for technology transfer, enhancing the dynamic potential of small and medium-sized enterprises. A number of South East Asian countries have followed the Japanese model in this respect. Transnational corporations have also employed subcontractors to which they provide technical assistance and raw materials and technology, as well as marketing channels. Large trading companies similarly subcontract products and components.

In India, the government has made subcontracting compulsory for large firms. Some have set up their own industrial estates to accommodate their subcontractors. The Government's Small Industries Development Organization maintains a register of potential subcontractors and attempts to link them with larger units. Few, if any, other countries have followed this rigid path. The cumulative effect of natural and voluntary subcontracting in India is apparent in the purchases made by large firms from small firms, which rose from Rs 257 million in 1969-1970 to Rs 2,830 million in 1988. The Government of the Republic of Korea has actively promoted subcontracting through the Medium Industry Systematization Promotion Law. Under the law, the government plays a role — as in Japan — in protecting subcontractor interests as well as in providing credit and technical assistance to promote subcontracting.

Although the Indian policy of reserving a large number of products for small-scale industry has been widely criticized (834 such products were reserved at the height of the policy in the 1980s), some mild form of protection is common throughout Asia. Indonesia and the Republic of Korea have reserved 128 and 110 items, respectively. China has tried to allocate certain products to small industry as part of its planning process. Other preferences are granted to small-scale industry in relation to government purchases. Although these protection measures are now being drawn down throughout the region on the grounds that they interfere with competitiveness, some degree of protective discrimination is likely to continue.

Entrepreneurship in developing countries - the case of Latin America

In the Latin American context the need seems to be for an extensive redefinition of public and private sector roles, including the privatization of state assets as well as the restructuring of enterprises that remain under state control. The size and influence of the state sector has shown considerable variation across Latin America, although a rising trend characterized the 1970s and early 1980s.

The enabling environment

The evidence on public enterprise performance in Latin America is ambiguous, but there has been a growing sentiment that the public sector is too large and requires considerable pruning. Privatization programmes have been adopted by most Latin American governments and supported by the private sector. However, the pace of privatization varies considerably across the continent, reflecting the differing legacies of state enterprise, political considerations and budgetary pressures. Moreover, it is important to recall that transfers of property rights per se will not guarantee improvements in economic performance.

Chile and Mexico appear to have had the greatest success in privatizing large segments of their public sectors. Argentina has also experienced some success despite opposition from trade unions and an unfavourable economic situation. In Bolivia and Brazil, rhetoric has outstripped action. Despite initiating one of the first privatization programmes in Latin America, Bolivian efforts have met considerable political resistance and changes to the state sector have largely been cosmetic. Similarly, Brazil's large state-run sector has been slow to disappear. Although the Sarney and Collor Governments have offered a menu of privatization schemes in a bid to keep the fiscal deficit down and thus contain inflationary pressures, the net result has been modest.

Some countries have favoured a more gradualist approach and others have tried a rapid sale of state assets. The former approach has been adopted in Mexico. From 1983 to 1985, the Mexican government closed down non-viable enterprises, from 1986 to 1988, it privatized small and medium-sized firms and only undertook large privatizations in 1988. Chile adopted the latter approach, and during 1975-1981 the government was committed to the rapid sale of state assets. During this period, financial liberalization took an extreme form and ignored prudent regulation, credit demand was biased towards high-risk firms, and banks adopted risky lending strategies. Policy makers often paid inadequate attention to the capabilities of the potential buyers of state assets. As a consequence, many privatized firms were unable to withstand the crisis of 1982-1983 and partial renationalization took place. The resumption of privatization has been slow, with greater efforts to diffuse ownership and screen prospective buyers.

Reform of remaining state assets is also underway, as exemplified by the Chilean electricity company, which generated an internal software subsidiary that it eventually sold to a transnational corporation. In the area of infrastructural and municipal activities, joint private-public initiatives have been established in a number of countries.

Successful privatization programmes require accompanying changes at both the micro- and macroeconomic levels to ensure that the destructive legacy of rent-seeking behaviour, patronage and corruption is broken and that the assets made available to the private sector are directed towards productive entrepreneurship. Enforcing competitive pressures through the entry and exit of firms requires legislative changes to ensure liberalization and clarity of property rights. In the Latin American context considerable emphasis has been placed on trade liberalization[33]. Rapid liberalization has been favoured both for reasons of credibility, particularly with outside investors, and to ensure that new activities are not channelled towards rent-seeking behaviour.

Economic liberalization has benefitted entrepreneurs by improving access to financing and reducing costs of imported inputs. Institutional changes in the form of legal, regulatory and judicial reforms have increased the efficiency of domestic markets by removing barriers to entry, lowering transaction costs and reducing the growth of the informal sector. However, the effectiveness of rapid liberalization is not independent of the global economic context or the nature of capital flows. The Chilean experience has shown that the benefits of successful trade reform are often stretched out over a decade.

Structural adjustment in this general context of liberalization has lowered inflation rates, produced more currency stability, revived the impaired banking systems, and financial markets, and created a more open market for trading goods and inputs. Steps have been taken to reform tax and public expenditure systems and negotiations on the debt overhang have improved international investment prospects.

However, reform measures have also had unintended negative consequences for entrepreneurship, particularly in the case of smaller businesses. In some countries, a system of advance tax payments has been instituted as a way of improving collections. These can serve as a barrier to entry into the formal sector. Smaller businesses also have problems dealing with increased competition resulting from lowered tariff barriers.

A response to these and other problems is the promotion of responsible associations of entrepreneurs. In Latin America the number of business associations and think-tanks has grown rapidly. These are privately and internationally funded groups of economists, entrepreneurs, lawyers and social scientists who publish newsletters, books and magazine articles and speak in public forums.

Latin American governments need to develop and use new approaches to regulating business activity to ensure that the benefits of entrepreneurship accrue to society as well as to individual entrepreneurs. Government should remove barriers to entry, allow entrepreneurs to hold and reinvest their earnings, obtain its rightful share of earnings (through appropriate tax legislation) and protect consumers and workers. Several countries, notably Panama and Peru, have begun to make progress in the realm of regulatory reform. Governments also need to learn how to act in partnership with the private sector - an activity that overlaps but is not synonymous with privatization.

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[33] See Chapter III of this Survey.

Financial intermediation and entrepreneurship

In the 1970s and early 1980s, many commercial banks in Latin America reduced lending to such an extent that small businesses were squeezed out of the credit markets. Bolivia is a case in point. Attempts in the 1980s to encourage formal financial institutions to expand their portfolios to include small and microenterprise through targeted and subsidized rediscount lines, such as those in El Salvador, are generally recognized as failures from the perspective of both the banks and the smaller-scale entrepreneurs. Mexico is an exception where small-business lending by banks expanded in the 1980s. The new Global Microenterprise Loans provided by the Inter-American Development Bank are not subsidized, and often include an institutional development component through which banks, credit unions and other participating financial institutions can modify their lending practices to be more responsive to small-scale entrepreneurs.

When the debt problem intensified, investment credit became available in the latter half of the 1980s through the Private Sector Revolving Loan fund of the Agency for International Development (AID), World Bank loans to national financial intermediaries, and the European Investment Bank. The Inter-American Investment Corporation (IIC) was established in 1989 to provide equity and quasi-equity investment in small and medium-sized enterprises. It invests in businesses directly and indirectly through investment in banks specialized in the small and medium-sized marketing firms and venture capital companies. Home-grown equity investment and venture capital funds are a very recent phenomenon, occurring primarily in Mexico in the form of Sociedades de Inversion de Capitales (SINCA), a tax-deferred investment vehicle. Pension funds lead the way in Chile. In the early 1980s some venture capital companies, which still exist despite the lack of exit mechanisms, were established by AID and the European Investment Bank in the Caribbean. The IIC views local venture capital funds as useful channels for its own investment in small and medium-sized enterprises.

To take advantage of improved terms of trade and newly revitalized capital markets, entrepreneurs must invest in new technologies. In addition, more family owned and operated companies need to be become public or at least turned over to professional management. Capital markets must be structured in such a way as to permit greater participation by smaller and newer enterprises and address local government issues. The expansion of capital markets underway in several countries quite naturally begins with the trading of government securities, and in some countries it is becoming possible for municipalities or other jurisdictions singly or in collusion to issue revenue. The existence of a market for such securities is crucial to sustainable privatization.

Education, training and entrepreneurship

Although most Latin American countries, with the exception of some of the poorer countries in Central America, have well developed primary education systems, the secondary and particularly the tertiary levels are less advanced. However, even a high level of human capital does not automatically translate into better economic performance unless the appropriate skills and attitudes are cultivated and the appropriate linkages to other activities are fostered.

Education offers an active role for government in promoting entrepreneurship through modernizing the school curriculums, in order to ensure that children learn the information-gathering, problem-solving and risk-taking skills and behaviours needed to succeed as an entrepreneur in the private or public sector. The underrepresentation of the hard sciences in general and engineering in particular among the tertiary student body is noticeable in all Latin American economies and stands in marked contrast to the rapidly developing economies of South-east Asia. Further, state administration needs to be reworked to allow these skills and behaviours to be used in the public sector.

The national skills training programmes funded by payroll taxes which are characteristic of the region have often lacked any orientation towards entrepreneurship, with recent exceptions in Mexico and Trinidad and Tobago. Both of these World Bank-funded national skills training programmes contain elements of training for self-employment.

Other programmes are designed to foster entrepreneurial orientation. The Empresarios Juveniles programme in El Salvador is designed for high-school students and is modeled after the Junior Achievement programme in the United States. Entrepreneurship development workshops are offered through local business associations and banks in Argentina, Brazil, Chile and Uruguay by a private firm under the auspices of the United Nations. The Instituto Centroamericano de Administración de Empresas (INCAE), a graduate school of business, offers certificate programmes in small-business management in Costa Rica, Guatemala and Nicaragua. Programmes in Bolivia, Brazil, Peru and elsewhere are conducted by NGOs and others using materials developed by the International Labour Organization and Fundación Carvajal.

Universities and research institutes in Latin America (international and state-controlled as well as private institutions) can be important contributors to and beneficiaries of private business development, as sources and channels of technological innovation. Formal mechanisms - internships, extension services and investment or incubator-like activities - for creating linkages between university generation and commercial application of technologies are being tried, among others, in Argentina, El Salvador, Guatemala and Mexico. An evaluation of these experiences would be valuable - and the results could be shared with post-secondary educational and research institutions throughout the region.

Technology policy and entrepreneurship

For most of the 1960s and 1970s, Latin American countries favoured import substitution strategies in the capital goods sector. This policy was reversed in the 1980s and Latin American countries have been actively stimulating foreign investment by moderating perceived risks through the establishment of enclaves, tax relief and related measures. Investment promotion in the Caribbean to attract manufacturing has resulted in the establishment of "free zones". This investment has created considerable employment and improved national trade statistics. It could also be argued that enclave measures combined with trade incentives are the genesis of the huge and growing maquiladora industries in Mexico.

Subcontracting provides one important means to foster domestic entrepreneurial capabilities and develop technological know-how. The major form of subcontracting in Latin America is with U.S.-based multinational corporations and, to a lesser extent, large, locally owned private firms. However, the patterns of involvement are changing. East Asian multinational corporations are overtaking U.S. firms in some sectors, bringing with them different methods of supply and distribution. Business associations and NGOs are active intermediaries in promoting subcontracting. They operate or promote subcontracting exchanges (as in Brazil, El Salvador and Peru); sector-specific manufacturing networks (as in Costa Rica, El Salvador and Nicaragua); banks for financing raw materials projects (as in Guatemala); and contract farming (as in Belize, El Salvador and Guyana). Subcontracting in services (such as data-processing in Jamaica) and distribution of consumer durables occurs without NGO involvement. Two legal issues bar greater reliance on subcontracting as a means for business formation and growth in Latin America: unpredictable adjudication of contract disputes and inadequate intellectual property protection.

Another increasingly important form of enterprise development in Latin America is franchising. Widespread multinational corporate franchising is complemented by domestic producers that combine contract farming and fast-food franchising.

Although the import of embodied and disembodied technology is important in stimulating productive entrepreneurship, there must be the skills and capabilities to absorb it. In this respect, the commitment of most Latin American economies to R&D has been disappointing. Moreover, existing efforts have been poorly integrated with industrial needs. Mexico, which has one of the highest R&D expenditure in the region, devotes only a little over one quarter to research in the productive sector. In a number of countries with debt problems expenditures fell during the 1980s. For example, Brazil's R&D expenditures fell during the decade from 0.7 per cent to 0.4 per cent of GNP.[34] Such a short-sighted strategy is damaging to the entrepreneurial potential of the region.

Some new initiatives in stimulating technological development have been undertaken. A number of Latin American countries have experimented with incubators, which are a facility for the maintenance of controlled conditions to assist in the cultivation of new companies. Incubators may be for or not-for-profit operations and are often started by NGOs or educational institutions. Efforts to establish incubators in Latin America have run into the long-standing problem of technology transfer in the region resulting from the weakness and isolation of science and engineering education and research. Incubators work best in environments that are supportive of information flow and innovation. There are successful exceptions, notably the Instituto Technológico de Monterrey in Mexico, which has an active private sector outreach and development programme.

Furthermore, there have been experiments with industrial estate projects, such as the projects financed by the World Bank in Barbados in the early 1980s. These provide physical infrastructure and have proven attractive to a range of manufacturing enterprises, which in turn have generated a market for independent management consulting companies to assist those businesses. But more typically, they have been beset by difficulties, as is the case in the 93 industrial parks built by a development organization in Mexico.

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[34] See Sanjaya Lall and Georg Kell, op cit., p. 290.

Entrepreneurship in the planned economies in transition

It is difficult to convey the deep uncertainty and instability that now surround economic activity across the Eastern countries. The rapid, anarchic disintegration of the social and economic fabric is unprecedented in recent history and the volatile political situation is eroding the support for pluralistic decision-making and the creation of market-based economic systems that existed at the outset of the transition, and all this is occurring at a time of wider global economic uncertainties, as reported in earlier chapters of this Survey. Initially it was believed that monetary stabilization in conjunction with privatization would create the environment within which independent economic agents would be able to make decisions beneficial both to themselves and to the overall health of the economy. Perhaps economic agents have been doing precisely that, but with the unexpected result of exacerbating the negative economic effects of the macroeconomic policy stances maintained by those managing the transition.

There is now little doubt that successful transition to viable market-based economic systems requires active policy on the supply side. Available resources must be allocated in a more effective way, given prevailing demand structures at home and abroad. In addition, available investment funds must be directed at the creation or modification of small and medium-sized enterprises that will produce not only more efficiently but also create newer products for which demand at home and abroad is highly income-elastic. In this respect, transformation will rest heavily on cultivating the endogenous learning, experimenting and imitating capabilities that are associated with productive entrepreneurship.

Developments in the East to date prove that changing from the degenerative administrative planning environment to more market-oriented economic systems is indeed a slow and difficult process. The formal elimination of old laws, regulations and institutions has not automatically led to a new ethic and market-type behaviour, and expectations of this have been repeatedly frustrated. Neither does public support for new values imply proper understanding by managers of privatized enterprises, workers, bureaucrats and emerging businessmen of the requirements and practices of a market economy. The state continues to be seen as responsible for saving failing enterprises; demands for negotiations with the government and presentation of plans to save certain enterprises or sectors are abundant, including in the most market-oriented countries of Central Europe.

Certainly, the spread of the private sector is an already noticeable and impressive feature of the transition economies. But its growth has been confined to agriculture, construction, some of the better manufacturing sectors and in particular retail and service sectors. Much of this growth reflects spontaneous privatization and the legalization of the second economy. However welcome such liberalization, rather than representing a completely new departure much of this activity formed an integral part of the "distributive state"[35] or derived from "political capitalism", and is thus not automatically leading to buttressing the aimed-for private sector.[36] In many of these areas ingenuity and independent activity were combined with short-term horizons not conducive to building up the kinds of capabilities associated with productive entrepreneurship; above all, much entrepreneurial energy was, and remains, directed to procurement rather than production.

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[35] Edmund Mokrzycki, "The legacy of real socialism and western democracy", Studies in Comparative Communism, No. 2 (1991), pp. 211-217.

[36] Jadwiga Staniszkis, "'Political capitalism' in Poland," East European Politics and Societies, No. 1 (1991), pp. 127-141.

Under the existing circumstances of profound uncertainty and institutional instability, profit maximization has reinforced this development. The institutional and legislative mix of old and new provides many opportunities for unproductive and destructive entrepreneurship through loopholes and inconsistencies. The privatization process across the East has been marred by speculative and fraudulent. It bears to stress that these incidents have by no means been confined to, say, Czechoslovakia or Poland. They have even occurred in the eastern parts of Germany, in spite of the institutional controls introduced by the Federal Republic of Germany to "normalize" the economy of what used to be the German Democratic Republic. Perhaps more damaging has been the rational but short-sighted strategy adopted by many larger monopolies under price liberalization.

But the commendable features of the tentative restructuring and adaptation that have begun to take place should not be ignored. Under the hardening of budget constraints and the pressures and opportunities provided by more open trade, enterprises have begun the difficult task of introducing the kinds of practices required for producing, distributing and marketing goods and services in a market economy.

This mosaic of separate and largely uncoordinated decision-making arenas, new developments and legacies of the previous system define a situation of incipient entrepreneurship. This is characterized by the emergence of a variety of independent practices released from the hierarchical tutelage and dependence of a central state, or emerging from the once barely tolerated 'second economy', and geared to profit-making. Although aiming at profits, the activities of these organs are as likely to be unproductive, and possibly even destructive, as they are. Under these circumstances, an urgent task during the transformation must be to create the capabilities with which to enhance productive entrepreneurship. Without such changes, former bureaucrats, managers and ordinary workers will keep the character of their work, its organization, personal behaviour and institutional relations bent towards the past[37] rather than towards the future conditions necessary to generate the desired growth path.

In the conditions currently prevailing in the transition economies it seems particularly unrealistic to rely exclusively on private responses. Moreover, if it is accepted that correcting the structural imbalances inherited from the command economy will not be a spontaneous outcome of expanding market forces and that unavoidable political conflicts will prevent simple technical responses to many of the problems encountered, then a sequencing of reform seems unavoidable.[38] This would certainly include the gradual improvement in the environment for productive entrepreneurship to take root. The move from incipient to infant entrepreneurship must be an integral component of any such sequencing of reform. There would seem to be three separate areas of infant entrepreneurship that merit the attention of government policy makers of the transition economies: the entry of new firms, regardless of whether they are financed from domestic savings or foreign direct investment; the establishment of small and medium-sized firms through privatization of state-owned property, including the deconcentration of giant state-owned firms; and finally the management and monitoring of the firms that will remain in the state's hands for the foreseeable future but are in urgent need of wholesale restructuring. Among the institutions needed to support entrepreneurship in these areas a reconstituted state is central.

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[37] Sociological evidence to this effect is most overwhelming for Poland (see Janusz M. Dąbrowski, Michał Federowicz and Anthony Levitas, "Polish state enterprises and the properties of performance, stabilization, marketization, privatization" (Gdańsk: Gdańsk Institute of Economics, 1991, mimeographed), pp. 38-44; Richard A. Jenner and Joseph Gappa, "Learning under fire: adaptability of Polish managers to competitive market conditions", Journal of World Trade, No. 2 (1991), pp. 81-93; Zbigniew Grzegorzewski, "Sklejanie pękniętego szkła", Życie Gospodarcze, No. 2 (1991), pp. 1 and 4.

[38] For lucid clarifications of these and related issues, see David M. Newbery, "Reform in Hungary--sequencing and privatisation," European Economic Review, No. 3 (1991), pp. 571-580; and "Sequencing the transition" (London: Centre for Economic Policy Research, Discussion Paper Series No. 575, August 1991).

It is already apparent that the state in the Eastern countries is undergoing a process of reform by abandoning its old economic role and encouraging the rise of independent economic decision makers. In the light of these changes, the commitment to infant entrepreneurship should not be seen as a continuation of the old state tutelage but as the forging of new relationships. An integral part of this process must be the acquisition of new capabilities by the state itself to support and encourage entrepreneurship. These capabilities can be borrowed from abroad, for example, by imitating the legal and fiscal codes that are more or less standard in mature market economies or acquired through formal training courses in such areas as accounting, book-keeping and management. However, productive entrepreneurship is often specific to particular industrial or regional contexts and dependent upon tacit knowledge of these circumstances. Consequently, the appropriate entrepreneurial capabilities can only be fully developed in an interactive relationship with infant entrepreneurship itself.

The enabling environment

In contrast to many developing countries where pressure from below represents a significant component of the transformation process, the planned economies in transition must rely to a considerable extent on the state simultaneously divesting itself of the detailed responsibilities over economic activity that were part and parcel of the command economy and building up the appropriate environment in which productive entrepreneurship can flourish. The scale and breadth of this transformation needs to be kept in mind and full consideration must be given to the longer historical context of economic development in the region. The dismantling of the system of central planning reflects an explicit recognition of its failure to attain the performance levels established by market economies and perhaps even more strikingly those originally established by the planning systems themselves.

The initial success of the system has exposed its subsequent inability to sustain transformative growth, a failure which has systemic origins in the very institutions of the planned economy. In particular, with the growing complexity of the division of labour achieved under a highly centralized productive system, neither the incentives available to decision makers at the enterprise level nor the linkages established across economic activity supported a national system of productive entrepreneurship. Rather, the quantitative growth criteria centrally imposed and independent of cost considerations, produced an undue industrial bias and a concentration of economic activity in giant firms with monopolistic protection. The isolation of economic units from the pressures of international competition, which extended far beyond the concerns of infant industries or establishing requisite skills, reinforced these structural weaknesses.

Consequently, the linkages between firms and with other institutions necessary for innovation and entrepreneurship were weak or non-existent, vulnerable to the bounded rationality of the central authority and the uncertainty imparted by often arbitrary political oversight. The incentives generated by quantitative planning targets reinforced conservative behaviour and in the face of increasing coordination problems and informational asymmetries gave rise to extensive rent-seeking activity rather than the cumulative improvement in the quality of goods and services produced and the continuous upgrading of economic activity.

The economies in transition now aim at replacing the relations of a command economy as quickly as possible with a "normal market economy". That will call for taking the state out of much of the direct decision-making about the allocation of resources, putting in place the institutions of the market (including banking, legal framework, proper accounting, insurance and the like) and rejuvenating from the ground up the macroeconomic framework within which the market will be allowed to operate.

The pace and priorities in moving towards market institutions and democratic legislation vary considerably among the Eastern economies and depend on previous experiences with systemic reforms, the adopted transition model and the prevailing sociopolitical situation. The outlook for countries such as those of Central Europe is different from that of the Balkan countries or successor Soviet republics. In most countries priority has been given to dissolving political structures and redefining property rights. This has markedly raised the freedom of individuals to take independent decisions. But it has also removed the powerful apparatus, including the Communist Party, that controlled and coordinated the planning system. Reestablishing effective economic governance structures is an urgent task of the transition and essential for entrepreneurship.

Property rights and privatization

Establishing clear property rights is complicated in the transition economies because the legal frameworks in place are inadequate to guarantee private property and allow owners to enforce their rights through ordinary legal channels. Two additional constraints in the East complicate this process. One stems from attempts to embrace restitution of property, including financial compensation for assets acquired by the state. The other concerns the question of how to re-establish clear property rights presumptively inherited from the old administrative planning structures.

The first constraint has been built up over time as a result of the intrinsic inability of the central planning organs to overcome the principal-agent problem with those managing state-owned firms. This has built up rights for management (and sometimes workers) that resemble implicit property rights that will have to be recognized to some degree in any attempt to successfully privatize these economies. Repugnant as it may seem to those disadvantaged under communist rule, this has raised the issue of implicit property rights held by these vested interest groups that can be ignored only by aggravating the transition depression.[39]

The other constraint stems from the fact that some of the societal property rights were confiscated from private owners or from citizens who were forced to save. The first are confiscated property rights that may call for restitution (or compensation) claims that encumber the process of privatization and new capital formation. The latter form of denied property rights call for unorthodox mechanisms of privatizing state-owned assets through free or nearly free distribution.

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[39] These and related features on property rights and privatization are analysed in greater detail in Economic Survey of Europe in 1991-1992 (New York: United Nations, publication sales No. E.92.II.E.1), chapter 6.

These ambiguities over property rights have afforded economic agents with insider information, an opportunity to capture basic property rights not explicitly transferred to decentralized economic agents. Honouring legitimate claims to property rights in some form is something quite different from the opportunities afforded insiders to remove property rights that legitimately belong to others, possibly society at large. Pre-emptive renationalization of these assets would remove the uncertainty over these assets. But doing so without resolving the conundrum of accrued, implicit, or vested property rights might be unfair as well as counter-productive. And this process can be carried out only if there is broad cooperation on the part of enterprise management and workers.

Although in principle the economies in transition committed themselves to recognizing all existing property rights and to enable the emergence of a wide range of types of property rights, ranging from pure state property to pure personal property, the difficulties intrinsic to the transition have been compounded by the perceived need to restitute property formerly confiscated and to apply equity concerns in the transfer of property rights from the state to other owners. In any case, too much emphasis appears to have been placed on what to do with existing state-owned enterprises at the expense of resolving ownership and property rights over other assets which is more important for erecting new market systems and bolstering entrepreneurship.

The greatest assets of the former planned economies are urban and rural real estate and human capital, property rights to which have thus far been inadequately addressed. This lack of clarity has considerable implications for entrepreneurship. If economic agents cannot have secure rights, for example, to land and structures, the activities they are bound to opt for will be those with a short-term horizon requiring little long-term investment. These rights need not encompass full ownership; clearly defined leases to land and structures could generate sufficient certainty for economic agents.

The process of privatizing the transition economies may encompass a sequence of distinct phases, possibly ranging from endowing state enterprises with a corporate structure recognized in a legal code, to placing even such firms on a firm commercial footing, to divesting part of the property rights (the usufruct) to non-state agents, and to full divestment through sale to domestic and foreign agents or free distribution to the population at large and former owners. Though this concept differs from the way privatization is widely viewed in market economies, it is the preferred concept precisely because market economies that decided to shrink their public sector never faced the daunting complexity of making a market economy out of a mismanaged planned economy.[40]

The privatization process in the East is generally separated into so-called "small" (or "petty") and "big" (or "real" or "mass") privatization, basically for two reasons. One is the goal of improving the efficiency of asset use, buttressing private ownership as a key ingredient for strengthening democracy and permitting the population at large to acquire in some form, possibly through free-distribution schemes, assets that were earlier withheld from it for ideological, political or administrative reasons. The other is that it is now widely recognized that divestment, particularly in the case of core industry can proceed only over a fairly protracted period of time, even if policy makers are bent on divesting assets without having to worry too much about proceeds and distributional implications.

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[40] The justification of this choice over other concepts is provided at length in Economic Survey of Europe in 1991-1992, op. cit., chapter 6.

The dividing line between small and big privatization is not set hard and fast. The first is essentially concerned with the sale to the public-at-large (possibly residents, nationals, expatriates and other foreign private and legal persons) of assets that the state should never have arrogated to itself. These are essentially capital goods (including possibly arable land and housing, but certainly service shops, retail outlets, catering establishments, small workshops and similar productive units) which can be run at least cost through private ownership.

However defined, petty assets should be sold quickly through fair allocation mechanisms, such as public auctions (land reform may be organized differently). The goal is to quickly establish a core of private agent-owners who constitute the nucleus of an emerging middle class and can help strengthen democracy, the efficient production of new goods and services, and job creation for those idled by the transformation of the old economic structures.

Big privatization refers in particular to divestment through the sale or free distribution of shares in public firms that tend to be large, organized in conglomerates and highly monopolistic. The conglomerates may first have to be broken up into meaningful units to facilitate transfer and encourage competition. Multi-product or multi-plant conglomerates that have few links can be quickly split up, normally at a small cost. Monopolies can in some cases can be disaggregated into smaller, competing units. However, the economies of scale and sunk costs place fairly stringent limits on the degree of deconcentration and demonopolization that can be pushed through at an acceptable cost because of inevitable disruption of established links. The objectives of such divestment as well as the ways in which it could be achieved are, therefore, considerably more complex than is the case for small privatization. Consequently, the formation of a state agency to oversee the programme of privatization has proved unavoidable in virtually all Eastern countries.

Although the debate on privatization and divestment of state-owned assets has been at the centre of the economic and sociopolitical discussion in the East, the progress made by early 1992 remained rather (except, of course, in the eastern Länder of Germany, although even there progress has lagged well behind the expectations set and reset by the German Government). A few spectacular sales, mostly to foreigners, have occurred and laws on privatization and property rights have been put in place in a number of Eastern countries, but progress in the successor Soviet republics remains spotty. With petty privatization, with which rapid progress has been made notably in Czechoslovakia and Poland. In spite of the progress and experience gained, much remains to be done and it is far too early to draw any firm inferences from the experiences to date. The conclusions that can usefully be drawn[41] could be viewed as warning signals that the countries that have not yet moved forward with privatization and others that still have leeway in designing the nuts and bolts of that part of their transition phase may wish to factor into their approach to designing and fine-tuning the privatization process.

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[41] These are detailed in Economic Survey of Europe in 1991-1992, op. cit., chapter 6.

These conclusions are notably that neither privatization nor divestment can be pursued solely for economic reasons, but must be part and parcel of the political economy of the transition par excellence; a well-functioning privatization agency with minimal political interference is a critical ingredient; revenues from privatization invariably remain well below estimates made at the outset of the transition and are best not counted on to plug budget deficits; restitution and compensation claims gravely hinder making headway with privatization and clog the legal system, which in most countries is already overburdened; even new owners of privatized assets may engage in strategic behaviour, waiting to exercise their acquired rights until the sociopolitical situation becomes less unstable and opaque; attempts to distribute most of the nation's wealth directly to the population at large have foundered and schemes currently contemplated to distribute shares free or nearly free of charge to the population at large via investment or mutual fund certificates, shares or vouchers do not circumvent the problem of monitoring those running privatized firms; privatization, however motivated, is bound to become pragmatic over time, but learning from mistakes committed during the transition can be very costly, and delay the transformation process; information during the transition tends to be exceedingly "noisy" and asymmetrically distributed; efforts to restrict the distribution of wealth to resident nationals is bound to founder as proxies can always be found, albeit at a cost; and privatization without even a rudimentary capital market makes it very difficult to filter useful from noisy activities in the privatization process.

Once clear property rights are in place, the role of the private sector will acquire growing importance. Private capital formation should be encouraged within the boundaries set by law and the economic environment traced by macroeconomic policies and institutions. This is particularly important in the case of small and medium-sized firms. Fostering the formation of such firms, whether through a structural policy of the state or simply through the market, should rank high among the priorities on the agenda of the transition.

Stabilization, price liberalization and opening up to foreign competition

Most of the Eastern countries introduced price liberalization in the course of 1990 and 1991, removing administrative controls and allowing prices to fluctuate in response to supply and demand within the context of tight macroeconomic policies. The prices of some basic goods and services (such as housing, public utilities and non-tradable social services) and also wages remain closely administered.

The immediate effect of this liberalization can be measured both by the falling share of government outlays in GDP and the increased supply of goods, particularly from an expanding private sector. But this policy has also led to significant macroeconomic disturbances whereby dramatic falls in output have been accompanied by unanticipated price rises, especially in the large monopolies that continue to dominate output.

Trade liberalization, involving the abolition of the state monopoly of foreign trade and payments, is a natural analogue of domestic price reform. The result is a closer link between domestic and trade prices, in part through an operative exchange rate. This is also fostered by revisions in the protective regimes, by the nearly complete elimination of non-tariff protection and usually by bringing customs duties in line with international usances or even cutting them below prevailing levels.

Although world market prices are seen as the most reliable indication of relative prices and trade liberalization has been recognized as a powerful source of discipline on domestic producers, differences have emerged over the pace of reform. The question is not whether to open up, but at what pace domestic producers should be exposed to the full force of international competition given the weakness of the transition economy. The choice is between letting a large segment of domestic industrial enterprises fail, hence having to engage in a substantial social safety net, or retaining the protective regime over some period of time, thereby easing the social demands for some form of subsidy. This choice was present also in deciding how best to disengage from the CMEA trade, pricing and payment regimes. But precipitous action on the part of some partners in Central Europe combined with the disintegration of the former Soviet economic and political regimes, hastened the CMEA's demise. Similar events are currently transpiring in the dinar currency regime in Yugoslavia, under the stark realities of wartime destruction, and under the rapid erosion of the rouble currency regime in the former Soviet Union, and in its successor CIS.

Relatively unencumbered entry and exit of firms is essential for successful entrepreneurship. Through these pressures and incentives, a new class of entrepreneurs will establish firms offering unfamiliar products or producing and marketing existing products in more effective ways. In addition, newly emerging small firms can be expected to impart an important element of organizational flexibility and provide a valuable source of employment in the East. The appropriate incentives to encourage these new activities require, in addition to a robust price system, a legal and fiscal framework to ensure that the potential profit is captured by the innovative firm. The introduction of a legal code enforcing contracts and regulating cartels, mergers and market power and the establishment of a patent system are underway in most Eastern countries.[42]

A second area of particular importance in the East concerns the exit of firms. Firm survival was not an enterprise-level decision under central planning and bankruptcy became an unfamiliar event. Both the institutional and ideological acceptance of firm exit is an essential feature of competition policy. To expedite and smooth this adjustment, the introduction and effective implementation of bankruptcy laws is an urgent task. Correspondingly, the indiscriminate use of subsidies to and taxes on state-owned enterprises is gradually disappearing and a complete overhaul of the fiscal system to ensure a predictable and transparent relation between enterprise and state is being undertaken. Equally, an active labour market policy to ensure that the appropriate response to exit is forthcoming from the affected employees needs to be urgently addressed in the East.

Many of the measures to facilitate entry and exit of firms can imitate those already found in advanced market economies. However, even if transplanted with considerable professional assistance from the West, these environmental changes will take time to be fully established. Moreover, as no single model of industrial governance exists in reality in mature market economies, the need to make choices about the appropriate path is already apparent at this early stage.

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[42] On these issues there are important differences between Western market economies which have not yet been fully appreciated in the East. On some of these differences see Thomas M. Jorde and David J. Teece "Innovation and cooperation: implications for competition and antitrust", Journal of Economic Perspectives, No. 3 (1990), pp. 75-96.

Financial system and entrepreneurship

The rapid disintegration of state coordination has placed an additional burden on emerging financial institutions meant to fuel the fledgling market economy.[43] Whatever form of banking system may eventually be best suited to individual countries, the absence of banking experiences, even in the more advanced Eastern countries, may caution against too close a link between banking and industry. Striving immediately for a universal banking system may simply concentrate decision-making power over the corporate sector in the hands of inexperienced bankers lending to inexperienced managers.[44] However, the daunting task of transformation and the already established links between existing financial institutions and industrial concerns strongly suggest the need for some kind of industrial banking. This difficult dilemma has yet to be seriously faced in the East.[45]

Progress has been made in dismantling the monobank system and replacing it with a two-tier banking structure. Central banks have been established and separated from commercial banks. However, independent private banks have so far been slow to emerge in the East with the notable exception of Poland.[46] The most obdurate legacy of the state banking system is the acute absence of skilled personnel to run a modern financial system. Consequently, advice is being sought from western banks with respect to technology, know-how and personnel training.[47] "Twinning" with western banks has already proved attractive to newly commercialized Polish banks and has been supported by the International Finance Corporation. However, clarity on the role of the new financial system in the restructuring of enterprises has not matched these initial developments.

Most Eastern countries have demonstrated a strong proclivity for setting up a stock exchange and moving rapidly forward with other securities markets. Part of this inclination stems from the chosen models of privatization, including share sales or free distribution of shares that can be adjusted to portfolio preferences through public trading. Though tradability is needed to enable agents to re-equilibrate their preferred portfolio, a good deal of the sentiment in favour of erecting securities markets derives from misconceptions about the role of the stock exchange in economic development. Abuses have rapidly come to the fore and volatility of stock markets and the quick saturation of markets, particularly at a time of stringent monetary control, have eroded investor confidence.

The disappointing returns for individual investors and the slow pace of privatization have seriously complicated the task of building capital markets in the Eastern economies.

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[43] Tadeusz M. Rybczyński, "The sequencing of reform", Oxford Economic Policy Review, No. 4 (1991), pp. 26-34 and Alfred Steinherr, "Essential ingredients for reforms in Eastern Europe", Moct-Most, No. 3 (1991), pp. 3-27.

[44] Useful arguments along those lines are developed by Millard Long and Silvia Sagari, "Financial reform in the European economies in transition" in The transition to a market economy--volume II: special issues, edited by Paul Marer and Salvatore Zecchini (Paris, Organisation for Economic Co-operation and Development, 1991), pp. 430-441.

[45] The issues are discussed in Jenny Corbett and Colin P Mayer, "Financial reform in Eastern Europe: progress with the wrong model," Oxford Review of Economic Policy, No. 4 (1991), pp. 57-75.

[46] The reforms to the Polish financial system are discussed in further detail in Central European, February, 1992, pp. 18-29. See also the survey of financial legislation in Czechoslovakia, Hungary, Poland and the former Soviet Union in Corbett and Mayer, op cit., pp. 71-74.

[47] See "In red braces", The Economist, 6 April 1991, pp. 79-80.

Other non-banking financial institutions (such as insurance and pension and mutual funds) are still in an embryonic state, even in countries that are most advanced in restructuring their financial systems. The banking sector itself tends to be more a source of distortion than of support to infant entrepreneurship. Restructuring of the banking sector is not progressing fast enough and the roles of the banking sector as opposed to securities markets and stock exchanges are not well defined. The whole process seems to be evolving haphazardly and not within a comprehensive longer-term vision of the basic requirements for entrepreneurship.

Credit continues to be allocated primarily to "clients", chiefly the state-owned enterprises, cultivated under administrative planning. This is partly due to the persistence of old established ties, the debt structure inherited from the past and the fact that the vast majority of banks continue to function more as arms of the treasury than as commercial entities entitled to enforce bankruptcy for bad clients. This problem cannot be solved without clearing the balance sheet of enterprises and taking political decisions about how to absorb and distribute the losses. That does not necessarily require that all bank debt be taken over by the government.[48]

The weakness of the financial system has several negative consequences for entrepreneurial activities. First, many financially weaker firms have advantages over economically more robust firms in obtaining bank credits, which militates against the promotion of development. Second, there is a tendency to allocate resources to sectors and activities that do not involve longer-term financial commitments but guarantee quick repayment of credits (commerce and short-term arbitrage transactions). As an example, during the initial phase of the transition in 1991 Kommerční Bank in Czechoslovakia, which handled the majority of private accounts, instructed its subsidiaries not to grant long-term credit to private firms.[49] Moreover, although the credit ceiling to state firms is Kčs 100 million, it is only Kčs 5 million for private firms. Third, access to credit for new firms is limited by their lack of familiarity with applying for credit and the banks lack of knowledge about how to process them (risk evaluation, forms of financing to offer or guarantees to accept).[50] Some of these skills can be transferred through training arrangements with western banks but others can only evolve with the establishment of appropriate financial linkages between banks and potential entrepreneurs.

Credit facilities in support of small enterprises in the East have been established by a number of international agencies, notably the World Bank and the European Investment Bank, offering favourable interest rates and conditions. Moreover, domestic institutions have emerged to provide financial assistance to small and medium-sized ventures. A case in point is the Hungarian Enterprise Development Foundation created in 1990 with resources from the government of 21 million ecu.

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[48] It is ironic, to say the least, that those commentators most in favour of leaving the economics of the transformation process up to the market are the first to entrust the government with all kinds of obligations (including bad bank debt, interenterprise debt, the social safety net, building infrastructure and rectifying environmental degradation), while at the same time upholding the need to restrain the fiscal powers already well beyond the current debilitated ability to collect revenues from all but the state-owned sector, to the extent that has not yet been completely crippled.

[49] The bank has since been partly sold to foreign interests and is now the subject of voucher-type privatization. This reorganization and change in ownership and promises of more to come may have altered bank policy since then, however.

[50] Although there are some attempts to facilitate access to credit for small business, the prevailing reality remains unsupportive of small and medium-sized firms (see Witold Pawlowski, "Mały i średni business-wersja Polska", Polityka–Export-Import, November 1991, p. 1).

Education, training and entrepreneurship

In comparison to other transforming economies, the Eastern countries have had well-developed systems of national education at all levels, in part because of the strong commitment to formal learning. It is a reminder of the short-term outlook in some of the transition economies that even essential education taken for granted in most Western societies is now being increasingly subjected to "market" criteria. Although economic stagnation over the past decade adversely affected resources directed to education in the East, a stock of skilled human capital remains, and the quality of human resources in most countries of the region are considered an important asset and potential for entrepreneurship. Workers and managers have acquired relatively high levels of professional knowledge and skills particularly in traditional activities such as heavy industry, textiles and engineering.

There are, however, major obstacles in activating this potential. First, the undeveloped market culture means poorly developed knowledge of how the market economy functions and what its basic rules and relationships are. Major changes in the education system and development of business schools and management training are essential to overcome this obstacle. A new education system should provide not only diversified channels to acquire new professional skills but also new curriculums that can serve to remodel old mentalities, habits and attitudes.[51]

Under the current conditions, a new system of national education and basic research faces severe organizational and financing problems. Education was previously a truly public good freely available to virtually everyone.[52] A new concept of how to guarantee the supply of education is yet to be formulated. Not only will reorganization be required but a complete retooling must be undertaken, something that will require considerable resource commitments. Most countries are responding *ad hoc*, usually taking short cuts to meet budgetary constraints. Perhaps the most immediate concerns for education systems in the region derive from serious cuts in funding because of current macroeconomic stringencies.

In addition to formal education, productive entrepreneurship requires a considerable amount of experience-based knowledge which can only be cultivated in the particular sectoral and enterprise context. The formation of regional business centres to provide advisory, research and educational programmes in Hungary and the rapid spread of technical consultancies in Poland are encouraging in this respect. Executive programmes provided by public and private agencies, company-based programmes and sector-based training courses for specialists in various areas should be part of the broadening of education in support of productive entrepreneurship.

A successful transition to a market economy and the maturing of entrepreneurial activities requires major changes in the sectoral structure of employment parallel to the restructuring of economic activities towards more efficient industries and services. New skills and knowledge will be needed and a whole system of training, including active labour market policies, should be put in place, accompanied by a robust and financially viable welfare policy for those temporarily out of work. The primary effort should be in fostering labour-market flexibility rather than unemployment compensation or simply subsidizing present employment. There is also an urgent need to reallocate many highly qualified specialists and workers who are underutilized in their current positions as a legacy of administrative planning. A number of international agencies, including the International Labour Office, have begun to foster programmes targeted at these groups.

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[51] For a broad discussion of the issues involved in the former Soviet Union see Mikhail Bermant and Marina Feonova, "Training and retraining: the link with employment" in *In search of flexibility: the new Soviet labour market*, edited by Guy Standing (Geneva: International Labour Office, 1991), pp. 319-338.

[52] True, at the height of communist purism, children of tainted classes (such as the *kulak* or capitalist) were inhibited from pursuing higher education.

Technology policy and entrepreneurship

The Eastern societies have inherited a distorted R&D and technology policy, which unduly favoured some sectors, discriminated against others and in general failed to establish the necessary links between basic and applied research and between research institutes and the enterprise that could make full commercial use of the resources committed.[53] These economies will have to decentralize R&D responsibility, create the links that enhance its commercial applicability and redefine the role of public involvement and support. In this respect, a technology policy should be seen as an integral component of industrial restructuring and a complement to competition policy.

The earlier discussion emphasized the importance of establishing a commitment to R&D at the enterprise level. To the extent that R&D represents a long-term investment subject to cost calculations, tax incentives and financial support can provide valuable encouragement to in-house R&D. In addition, predictability of legislation and macroeconomic policies to enhance business confidence are likely to make for a more appropriate environment. Under the current uncertainties in the East it is urgent that these longer-term commitments not be sacrificed to short-term financial expediency. Similar considerations extend to the introduction of new process technologies through investment decisions.

In the apparent rush to dismantle large firms, their advantages in the area of R&D and the diffusion of process technology should not be ignored. This is particularly true in the heavier industries and engineering closely attached to the military complex, where firms have access to an established research network and cadre of trained personnel. Undoubtedly much existing research will have to be turned to more commercial applications, perhaps in the areas of information technology, environmental improvement or health care all of which have untapped market potential in the East. Moreover, such considerations do not exclude the formation of independent research-based enterprises in these areas with close links to larger firms. Indeed, the need to strike a balance between large and small firms is particularly apparent in the important engineering sector, where sub-contracting relations organized by larger firms has been an important incubator of entrepreneurship in market-type economies.

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[53] A broad overview is provided by Phillip Hanson and Keith Pavitt, The comparative economics of research development and innovation in East and West: a survey (London: Harwood Academic Publishers, 1987).

The proliferation of small and medium-sized firms in the East should also give rise to innovation centres and small business support groups providing information, consultants and educational training, all of which have become increasingly important in developed countries in recent years. Technology parks are now under consideration in a number of Eastern European countries. The Wielkopolska Innovation Centre in Poznań is engaging the support of provincial councils, industry, economic and craft associations to facilitate such a venture. A joint-venture between the Finnish and Hungarian Governments is under discussion to establish a 100 hectare park comprising firms from both countries. The Bovis group of the United Kingdom is developing a technology park adjoining the University of Brno in Czechoslovakia. In the Russian Federation, the Moscow Institute of Aviation Technology and Moscow University have pioneered efforts at creating an entrepreneurial environment that can harness existing educational expertise. Undoubtedly the established commitment to education in most countries in the East has provided considerable opportunities for entrepreneurship through knowledge-based activities and such developments seem particularly encouraging to productive entrepreneurship. The formation of industrial districts that can share the burden of delivering necessary services to small firms might provide useful lessons for some industries in the East. In all these respects, considerable initiative will have to be forthcoming from regional and local states and business organizations.

These changes require major institutional reforms of the Eastern societies. With greater enterprise responsibility and the establishment of a more robust and internationally standardized patent system, fewer layers of middle-level R&D administration will be required. However, some kind of ministerial recognition should be given to technology policy. In addition, links to Western European technology programmes might be considered as part of the rising tide of cooperation among European governments.

The urgency of technological restructuring in the East, to enhance productivity and competitiveness on international markets and to improve environmental conditions, has focused considerable attention on foreign direct investment as a source of technical know-how and entrepreneurial capabilities. The sharp rise in the number of registered joint ventures since 1990 is encouraging, even though the actual flows of foreign direct investment have been less pronounced. Thus far, Hungary has been disproportionately favoured in this respect. Over the longer term, once a modicum of stability in monetary and fiscal policies is restored, the East might become a favoured location for foreign direct investment. Under the current circumstances, however, it would be unduly optimistic to expect foreign direct investment to underpin the transition.[54]

Caution is also called for in view of the asymmetric information facing most Eastern countries dealing with large foreign companies and the potential for opportunistic behaviour by international firms. Although there is some evidence that foreign firms are finding the availability of a cheap scientific labour force a significant attraction for enhancing their own R&D efforts,[55] considerable domestic efforts should be made to establish the appropriate linkages between such activities and the wider economy in order to avoid becoming a passive recipient of innovation.

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[54] See Carl McMillan, "Foreign direct investment flows to the Soviet Union and Eastern Europe: nature, magnitude and international implications", Journal of Development Planning, No. 23 (1992), forthcoming.

[55] For the case of Hungary see "A kiss of life from across the border", Financial Times, 21 April 1992, p. 31. However, figures for the eastern part of Germany have shown a rapid decline in the number of scientific personnel in industry since unification (see "A bitter dose of pills for the Treuhand to swallow", Financial Times, 9 September 1991, p. 11).

Experiences at the enterprise level

Economic recovery and the emergence of a pro-growth alliance will in all these economies be dictated by the extent to which productive entrepreneurship takes hold at the enterprise level. In this final section the focus will be on the emergence of independent small enterprises, the creation of medium-sized firms through privatization and the restructuring of large state-owned enterprises.

The growth of small firms has dominated the change in industrial structure in nearly all Eastern countries over the past two years. Their number has grown explosively particularly in Central Europe. In Czechoslovakia between May 1990, when private business was legalized, and March 1991, just under 700,000 individuals had registered to conduct business. In Hungary, between December 1989 and June 1991, the number of individual entrepreneurs rose by over 118,000 and the number of limited liability companies by over 22,000. In Poland the number of small firms rose from over 800,000 in December 1989 to nearly 1.3 million in December 1991. The pace has been somewhat slower elsewhere. However, in countries with legislation on privatization, clear property rights and liberalization, the pressure to create small firms is inevitable.

Oftentimes, these new firms come about through "spontaneous privatization" by hiving off parts of the large state-owned firms, or the legalization of activities previously confined to the second economy. Many observers suggest that the second economy is a repository of actual or latent entrepreneurial initiative and will be in the vanguard of moves towards new economic structures in the East. There is undoubtedly some truth to this. However, the attachment of many of these smaller firms to the previous economic regime does not confirm their ability to underpin transition to market-based economic decision-making in the East. Expectations should not be set too high and the second economy should certainly not be equated with the small innovative enterprise sector typical of fast-developing market economies.

True, much of the activity in the second economy required independent initiative, particularly in the case of small businesses supplying state enterprises with necessary inputs and responding to user needs through close supplier-customer relations. However, engaging in these activities depended on having access to labour, machinery and inputs acquired from the state sector, often illicitly and well-below fair value, if not through outright theft. Many facets of the second economy, perhaps paradoxically, depended on the hoarding practices of state enterprises. Mobilizing resources required channelling entrepreneurial energies into procurement rather than production. With restructuring, many of these activities will loose their rents and become unviable.

Even when approved in formal legislation, small firms were moving quickly in and out of various businesses and were not allowed to become too conspicuous. Longer-term efforts involving investment risks and experimenting with new products or technologies did not pay off in such a hostile and unpredictable environment. Furthermore, the conditions of seller's markets in a monopolistic environment that many private firms or cooperatives managed to build for themselves did not stimulate creativity and entrepreneurship. Many managers of cooperatives and private firms under central planning had thus similar priorities and positions to those of their co-equals in the state sector. They tended to be more inclined to lobby and bribe than to innovate and look for new opportunities.

Whether the new small firms, once they become operational, which many never do, will eventually provide the buttress for productive entrepreneurship remains to be seen. Many new firms represent part-time or second occupations, mostly of an arbitrage nature, and will disappear in a more stable economic environment. The turnover rate is particularly high, which may reinforce short-term horizons. Most remain concentrated in services and trade, have an employment of five or less and tend to cluster in large urban areas. The initial capital outlay, in most cases, is very small.[56] Many of them face extraordinary difficulties, some of which have been detailed in earlier sections. Although incomes tend to be larger in small enterprises the risks of failure are also high, and entrepreneurs voice considerable skepticism over their future prospects. The main obstacles tend to be lack of technological skills, absent or inappropriate bank services to meet their needs, inadequate government support, fiscal disincentives and the difficulties posed by an unstable macroeconomic climate.

None the less, the preponderance of new small firms in the service sector and trade is indicative of an improving entrepreneurial environment and further "petty" privatization should add considerably to the numbers. Developments in the service sector can be expected to make a significant contribution to the growth of the economy--providing necessary skills for other small businesses such as accounting, legal services, marketing and advertising. Equally, the rapid expansion of the retail sector has been the source of important institutional innovations--such as franchising agreements and leasing arrangements[57]--and potentially of capital accumulation to entrepreneurship in other sectors.

It is the weak showing of small firms in manufacturing that is worrisome. Evidence from Hungary suggests that profit rates are considerably lower than in trade or the service sector, and the dependence on outside suppliers and the market of state-owned enterprises is greater. However, examples of smaller engineering companies, technology-intensive and design-based small firms producing a high quality product can already be found in some countries including the former Soviet Union.[58]

One immediate problem is the weak voice of small firms in presenting their common grievances and demands. In response, a number of countries have established small business institutions of some kind. The Hungarian Small Business Administration is responsible for coordinating policy affecting small business activity and the Foundation for the Development of Small Enterprises provides additional support and a voice for small business. The Polish government has formed the Department for the Promotion of Entrepreneurship to provide informational services to small and medium-sized firms and training programmes are being established through the EC's PHARE (Pologne-Hongrie: assistance à la restructuration économique). Government support has been slower in Czechoslovakia although an active association has emerged that was instrumental in preparing the draft of the first entrepreneurial law and a number of private initiatives to promote training and funding have emerged. Bulgaria has recently established a small business association. The nucleus of institutions such as the Union of Small Enterprises, the Trade Union of Small and Innovative Enterprises and the Small Business Development and Support Federation, inherited from the ex-USSR may provide support in the successor republics.

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[56] For evidence from the Hungarian experience, see Studies on Small Business and Telecommunications (Budapest: Gazdaságkutató Intézet, November 1991, mimeographed).

[57] See "Franchising in Eastern Europe", The Economist, 6 April 1991, pp. 70-71.

[58] See A.A. Blokhin, "Market enterprise and innovation", Studies on Soviet Economic Development., No. 1 (1992), pp. 27-33; "Free enterprise puts its best foot forward", Financial Times, 26 November, 1991.

A pressing need that should be addressed is fiscal support in the initial stages of enterprise formation through allowances or tax exemption.[59] Fiscal reform has so far been dictated by macroeconomic and distributional concerns. However, fiscal incentives for investment are essential during the transition period. This is particularly true in the case of smaller enterprises whose return to investment, as in sophisticated engineering and scientific research, can be expected to take a longer time to materialize. The state could also favour these small firms through its own procurement policies.

Privatization has created a growing number of independent small and medium-sized enterprises that may underpin the transition to effective market relations in the East. However, the pace and depth of this process varies widely across the various countries. Undoubtedly, further developments rest heavily on the actions of the public agency established to oversee the privatization process.

Despite its many unique features, the lessons of the Treuhandanstalt responsible for privatizing firms in the former German Democratic Republic are instructive. Faced with a highly concentrated production sphere and a variety of conflicting economic and political pressures, the Treuhand's agenda quickly evolved from auctioneering state assets into an implicit industrial policy distinguishing between viable firms that could be quickly privatized, firms in need of restructuring and firms that are unlikely to achieve competitiveness and must be closed. Despite the agency's commitment to selling state-owned assets, it has often been necessary to forgo revenue maximization in exchange for ensuring the appropriate managerial capabilities and commitments to invest.

The Treuhand has disposed of the majority of its 20,000 small businesses in retail and services and close to half of the 10,000 larger enterprises; chemicals, pharmaceuticals and engineering companies have found ready buyers. However, the Treuhand has been forced to monitor prospective buyers more closely in the face of a number of fraudulent deals and enforce penalties for broken contracts.[60] The medium-sized enterprises that have underpinned the economic success of the western Länder have not been attracted to the eastern Länder in great numbers. The reasons lie with the still poorly defined structure of property rights, the debt of many firms, pollution levels and the existing capabilities still embedded in the old management.

In other economies the privatization process presents a more varied picture although, as previously described, progress has generally remained modest. Efforts to date have been concentrated in real estate, trade, service industries and construction. However, there is some evidence that the industrial firms sold have been in the more competitive sectors.[61] Many of these companies have had exposure to western markets and have export potential based upon an established brand name. More aggressive marketing and organizational reforms of the workplace can be expected to bring substantial benefits. In many respects, these firms face some of the greatest restructuring problems in the transformation period. In particular, they lack the necessary links to banks to help finance a systematic restructuring programme and are least able to increase prices in response to liberalization while having to accept higher input prices for energy and basic metal producers. Moreover, small and medium-sized producers are usually more dependent upon an extensive supplier network, which remains unpredictable in many Eastern countries.

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[59] Sergio Arzeni, "Encouraging the Entrepreneur", OECD Observer February/March 1992, pp. 19-22.

[60] See "Privatization in East Germany", The Economist, 14 September 1991, pp. 21-24; and "Treuhand has second thoughts", Financial Times, 16 October 1991.

[61] See Paul Hare and Gordon Hughes, "Competitiveness and industrial restructuring in Czechoslovakia, Hungary and Poland", European Economy, Special Edition No. 2 (1991), pp.83-110; Irena Grosfeld and Paul Hare,

Despite these obstacles small and medium sized firms have shown great willingness to engage in serious restructuring. The squeeze on profits stemming from the economic recession has produced a managerial commitment to restructuring and a greater degree of cooperation from the labour force. Enterprises, particularly in the consumer goods sector but also light engineering, have been quicker to introduce modern marketing strategies compatible with the new environment--including such organizational innovations as consignment systems and factory outlets. Market research and advertising have also been more readily adopted and improvements in product quality and diversity is more common among smaller than larger producers.[62]

Although privatization has not yet become an established strategy in the former Soviet Union, productive entrepreneurship has developed in the cooperative sector. Significantly, between 1989 and 1990 the number of firms engaged in project design, scientific research, information technology and computers rose markedly[63] based upon a higher quality product and service. Similar developments can also be found in consumer goods industries, such as clothing.[64]

The supply of appropriate entrepreneurial capabilities is a major concern for medium-sized enterprises. Evidence from Germany and Poland suggests that the removal of an existing management structure is likely to generate significant improvements in company performance. However, it is inevitable that the vast majority of the present management will remain in place and, despite some striking evidence of the qualities of management in the East and entrepreneurial commitment of bureaucrats,[65] considerable retraining will be essential.

For small and medium-sized enterprises, financial services and access to credit are a significant problem. Many firms require sizable financial commitments to make the necessary restructuring and introduce a more up-to-date capital stock and despite being less saddled with debilitating debts than some of the larger firms many domestic financial institutions remain committed to the latter. Consequently, short-term cash-flow problems might force the closure of viable firms and existing distortions allow inefficient firms to survive.

"Privatization in Hungary, Poland and Czechoslovakia", European Economy, Special Edition No. 2 (1991), pp. 129-156.

[62] Janusz Dąbrowski et al., op. cit.

[63] See Ekonomika i zhizn', No. 12 (1990), p. 5.

[64] See Business in the USSR, November 1991, p. 88.

[65] For examples in the former Soviet Union, see "Fanning the spark of capitalism", The Economist, 18 May 1991, p. 82.

The difficulties surrounding privatization and restructuring are most pronounced with the large enterprises that dominate the East's economic landscape. Some of these giants can be disaggregated into self-contained smaller units. But there is now a growing awareness that a number of these firms will remain in state hands. Unfortunately the continuation of state ownership has been a strategy of last resort and a positive programme of restructuring has yet to evolve.[66] However, the viability of an industrial policy with an explicit commitment to winners and losers has recently been receiving more careful attention, although the institutional support and expertise is as yet not in place.

The requirements for restructuring are arguably largest in energy and metals complexes, particularly those directly related to defence activities. Substantial investment in more efficient and environmentally-friendly technology and the development of downstream industries will be required. This task is especially daunting in the case of the former Soviet Union. The necessary investments to bring up mining and production operations to an acceptable international level will almost certainly involve agreements with transnational corporations.[67] Similar problems and opportunities face the energy sector.

The military complex and its related engineering firms face a difficult period of conversion to civilian production which has only just begun.[68] Many of these enterprises are overly diversified and have a hierarchical managerial structure hostile to innovative activity. The collapse of established domestic and export markets has increased the urgency of drawing on this potential in electronics, computer technology, materials and communications, from modern fibre optics to aircraft. In the former Soviet Union the room for joint ventures in aircraft, space related projects including satellite technology and communications technology is already under discussion and similar agreements in more traditional consumer goods should also be possible.[69] The emergence of successful larger enterprises in the engineering sector may become the basis of subcontracting relations to small firms.

The development of the transport and telecommunications infrastructure offer real possibilities for restructuring in support of productive entrepreneurship drawing on an established and internationally respected R&D base. Expansion of the telecommunications network is an urgent task across the East. The OECD has estimated that the cost of reaching western levels will be some $50 billion and the cost of modernizing exchanges and introducing satellite technology considerably more. Many of the major lending institutions have targeted telecommunications and western investment is following slowly. Opportunities for a constructive dialogue between private and public enterprise abound in this area.[70]

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[66] For a discussion of some of the issues see A.D. Nekipelov, "Transition to a market economy:the role and the future of the state sector", Studies on Soviet Economic Development, No. 4 (1991), pp. 269-276.

[67] See "Soviet aluminium industry shows its mettle", Financial Times, 10 October 1991; "Mini-mills, major problems", The Economist, 14 September 1991, p. 86.

[68] See Julian Cooper, "The Soviet defence industry and conversion: The regional dimension", in Defence expenditure, industrial conversion and local employment, edited by L. Paukert and P. Richards (Geneva: International Labour Office, 1991); and "From Soviet Minister to Corporate Chief", The New York Times Magazine, January 26, 1992.

[69] See "To Russia with Funds", Financial Times, 30 October, 1991.

[70] See "Telecommunications in Eastern Europe", The Economist, 8 February 1992, p. 74.

Annex

STATISTICAL TABLES

The statistical annex contains the main sets of data on which the analysis in the *World Economic Survey, 1992* is based. The data are presented in greater detail than in the text and the time series have been extended. In preparing the annex, the Development Policy and Analysis Division of the Department of Economic and Social Development obtained the collaboration of the secretariats of the Economic Commission for Europe (ECE) and the United Nations Conference on Trade and Development (UNCTAD). The annex is based on information from the Statistical Division and Population Division of the Department, the International Monetary Fund, the Organisation for Economic Co-operation and Development, the World Bank and selected national and private sources. Estimates of economic data for most recent years are made by the Development Policy and Analysis Division, in consultation with the regional commissions. Forecasts are largely based on the results of Project LINK, a collaborative international research group for econometric modelling, headquartered in the Division. Data in the present *Survey* are based on information available as of 1 May 1992.

The data in the annex pertain mainly to large economies and groups of countries, which are defined in the explanatory notes at the beginning of the *Survey*. The groups were chosen for analytical convenience in 1980 and are currently under review, especially in the light of the major geographical changes that have taken place recently in Europe and Asia. Aggregated data of developing countries are generally based on samples of countries, since some country data are at times unavailable or are available with a long time-lag. However, in general, the samples are large. For example, estimates of rates of growth of output in developing countries are based on data of 92 countries, accounting for an estimated 98 per cent of the population of all developing countries.

The *World Economic Survey, 1992* introduces two important changes which bear upon the comparability of the 1992 published figures and those of previous *Surveys*. First, the base year and the associated country weights for calculating the average growth rates of real output have been changed from 1980 to 1988. The base year was updated to better reflect the economic size of countries (see box I.1). The new base year was the latest year for which reliable data were available for the greatest number of countries. Second, new adjustments and revisions have been made to output and foreign trade data of the economies in transition in order to better approximate standard international definitions and thus enhance comparability with data from the rest of the world.

Updating growth rates of aggregate output

The growth of output of each group of countries is calculated from the sum of the gross domestic product (GDP) of individual countries measured in 1988 prices and exchange rates. The starting point for the calculation was thus to convert the GDP in national currency in 1988 into a dollar figure. In cases where the conversion at the official exchange rate yielded unrealistic results, adjustments were made based on other economic variables.[a]

Two changes were made in the grouping of developing countries. First, the sample of developing countries and regions now contains 92 countries, as compared with 83 in the previous *Surveys*. Second, among the capital-importing developing countries, because of changes in the importance of their energy exports, Colombia is now included in the group of net energy exporters and Peru becomes part of the grouping of energy importers.

Output of the economies in transition

When the transition economies of eastern Europe and the former Soviet Union were centrally planned, they measured aggregate output according to the concept of net material product. They now measure aggregate output in terms of GDP or gross national product (GNP) and have begun to publish this data in local currency, although times series in real and nominal terms do not always extend very far back in time. For purposes of the *Survey*, estimates of missing years had to be made, notably in the case of the former USSR.

Furthermore, in order to convert 1988 national output estimates into dollars for the calculation of base-year weights, a set of currency conversion factors was needed. In most cases, market-clearing exchange rates were unavailable for making the conversion. Estimates were thus made and compared for consistency with other estimates of relative economic size, including an update of an exercise carried out by the Statistical Office of the former Council for Mutual Economic Assistance (CMEA). This resulted in the regional averages contained in table A.3.

However, the level of output of the region in dollars underlying table A.3 seemed to understate the size of these economies relative to market economies, where prices were very different and played a different role in resource allocation. Thus, in calculating world output growth, as in table II.1, a purchasing-power-parity conversion factor was used to arrive at the weight of the region in the world economy. All in all, major shortcomings in the data preclude calling the results anything other than tentative estimates. They will be replaced with more firmly grounded statistical data as they become available.

The value of foreign trade of the economies in transition

Data on international trade among the member countries of the former CMEA have long been plagued by statistical difficulties arising from the artificial role that prices, particularly exchange rates, played in trade statistics. ECE has recomputed the dollar value of foreign trade of these countries to bring them closer to international standards[b] and these have been incorporated in table A.20.

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[a] No single methodology for making intercountry comparisons of GDP solves the host of incompatibilities in national data. The method used here may be revised in future years in the light of research under way in the Statistical Division of the Department of Economic and Social Development.

[b] See ECE, *Economic Bulletin for Europe*, vol. 42 (November 1990), pp. 29-32, and vol. 43 (November 1991), pp. 58-62.

Until 1990, the CMEA trade régime used units of payment and accounting, a commodity classification and reporting rules that differed from common international practice. A major source of the difference was the use of an accounting unit, called the "transferable rouble" (TR), for valuing intra-CMEA trade. Each country translated its local valuation of trade with CMEA partners into transferable roubles at its own TR exchange rate and used these figures for calculating TR balances in the CMEA clearing mechanism at the International Bank for Economic Cooperation in Moscow. For statistical purposes, the TR-valued trade was translated into dollars by each country at its own TR/dollar exchange rate. This resulted in widely divergent cross rates and inconsistencies between the statistics of trade partners (country A's exports to B were valued differently in dollars from country B's imports from A). In order to correct this, ECE recalculated the intra-regional trade of eastern European economies and the former Soviet Union until 1990 using a single TR/dollar exchange rate.

Although, in the past, intra-CMEA trade that was not transacted in transferable roubles was a small part of the total trade of the group, that portion jumped in 1991 with the dissolution of CMEA. Indeed, data in 1991 were largely valued in local currency and converted into dollars at national exchange rates, although substantial rouble-based trade still took place. In 1992, the problem will disappear as the transferable rouble is no longer in use.[c]

Thus, 1991 is a transition year for trade data of the region and the nationally measured changes in the value of trade from 1990 to 1991 should be interpreted as giving only very rough approximations of actual changes. The corrected trade series of ECE gives a somewhat better estimate; however, detailed data on commodity flows and national trade volumes, which are not yet available, will be needed for a more comprehensive analysis. In particular, unit values derived from trade value and volume data, as in table A.20, have to be interpreted with great caution.

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I. GLOBAL OUTPUT AND MACROECONOMIC INDICATORS

Table A.1. World population, output and per capita GDP, 1972-1991

	Population (millions)		Growth rate of population (annual percentage change)		GDP (billions of 1988 dollars)		GDP per capita (1988 dollars)		Growth of real GDP per capita (annual percentage change)	
	1981	1991	1972-1981	1982-1991	1981	1991	1981	1991	1972-1981	1982-1991
Developed market economies	769	833	0.8	0.8	11 530	15 177	14 999	18 211	2.4	2.0
of which:										
United States	230	252	1.0	0.9	3 991	5 038	17 357	20 009	1.6	1.4
European community[a]	319	342	0.4	0.7	4 067	5 181	12 761	15 155	2.8	1.7
Japan	118	124	1.1	0.5	2 184	3 350	18 561	26 990	3.3	3.8
Other developed market economies	102	116	1.2	1.2	1 288	1 609	12 578	13 909	2.0	1.0
Eastern Europe and the Soviet Union	377	387	0.7	0.7	2 093	2 212	5 546	5 722	..	-0.4
Eastern Europe	110	97	0.7	0.4	652	545	5 938	5 648	..	-0.9
Soviet Union	268	290	0.8	0.8	1 441	1 667	5 385	5 746	..	-0.2
Developing countries	3 321	4 095	2.2	2.1	2 466	3 479	718	830	2.7	1.5
by region:										
Latin America	365	451	2.4	2.1	770	895	2 109	1 984	2.8	-0.6
Africa	436	591	2.9	3.1	267	338	611	572	1.6	-0.7
West Asia	91	130	3.6	3.5	441	446	4 865	3 492	-0.2	-3.3
South and East Asia	1 352	1 685	2.3	2.3	641	1 157	500	711	3.6	3.6
Mediterranean	69	82	1.8	1.7	115	133	1 662	1 616	2.8	-0.3
China[b]	1 009	1 156	1.7	1.4	215	511	214	442	3.9	7.5
by analytical grouping:										
Capital-surplus countries	70	99	3.8	3.5	398	379	5 684	3 834	-0.6	-3.9
Capital-importing countries	3 251	3 996	2.2	2.1	1 963	3 099	636	754	3.1	1.7
Four recent surplus economies	64	72	1.8	1.2	205	436	3 185	6 015	5.9	6.6
Other	3 187	3 923	2.2	2.1	1 863	2 663	585	679	2.9	1.5
Memo items:										
Sub-Saharan Africa	249	340	2.9	3.2	91	107	367	313	-0.5	-1.6
Fifteen heavily indebted countries	495	625	2.5	2.4	874	992	1 764	1 587	2.6	-1.0

Source: UN/DESD.

[a] The former German Democratic Republic is included in Germany and thus the European Community, beginning 1991.

[b] Net material product until 1988.

Table A.2. Developed market economies: rates of growth of real GDP, 1982-1992
(Annual percentage change[a])

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]	1992[c]
All developed market economies	0.1	2.6	4.4	3.3	2.8	3.2	4.4	3.3	2.6	♦ 0.9	1.7
Major industrial countries	0.0	2.8	4.6	3.4	2.9	3.3	4.5	3.3	2.7	♦ 0.9	1.8
Canada	-3.2	3.2	6.3	4.8	3.3	4.3	4.6	2.5	0.5	-1.5	2.5
France	2.6	0.7	1.3	1.9	2.5	2.3	4.2	3.9	2.8	1.0	2.0
Germany[d]	-1.1	1.8	3.0	1.9	2.3	1.6	3.7	3.7	4.5	♦ 1.5	2.0
Italy	0.2	-0.3	4.0	2.6	2.9	3.1	4.1	3.0	2.0	1.0	1.5
Japan[d]	3.4	2.8	4.3	5.1	2.7	4.3	6.3	4.7	5.7	4.5	1.9
United Kingdom	1.4	3.8	1.7	3.7	4.0	4.6	4.2	2.3	1.1	-2.1	2.0
United States	-2.2	3.9	6.2	3.2	2.9	3.1	3.9	2.5	1.0	-0.7	1.6
Other industrial countries	0.6	1.5	3.4	2.8	2.4	2.9	3.5	3.6	2.4	0.6	1.7
Memo item:											
Western Europe	0.7	1.5	2.6	2.5	2.8	2.7	3.9	3.4	2.7	♦ 0.6	1.7
European Community	0.6	1.4	2.5	2.4	2.8	2.8	4.0	3.5	2.9	♦ 0.7	1.8
Other	0.8	2.4	3.0	3.2	2.4	2.4	3.0	3.2	1.7	-0.7	0.9

Source: UN/DESD.

♦ Indicates discontinuity in the series: from 1991, Germany includes eastern *Länder*.

[a] Data for country groups are weighted averages, where weights for each year are GDP valued at 1988 prices and exchange rates.

[b] Partly estimated.

[c] Forecast, based in part on Project LINK.

[d] Real gross national product.

Table A.3. Eastern Europe and the former Soviet Union: rates of growth of GDP, 1982-1992
(Annual percentage change)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Eastern Europe and the former Soviet Union	2.8	4.2	3.4	2.0	3.5	2.6	4.5	2.3	♦ -5.0	-15.9	-12.0
Former Soviet Union	4.0	4.3	3.0	1.7	3.6	2.8	5.3	3.3	-2.1	-17.0	-15.0
Eastern Europe	0.2	4.2	4.6	2.6	3.2	2.3	2.7	–	♦ -12.1	-12.5	-2.6
Bulgaria	2.3	3.4	3.4	2.7	4.2	6.1	2.6	-1.4	-11.8	-23.0	-9.7
Czechoslovakia	0.8	2.4	2.1	2.2	1.8	0.8	2.6	1.3	-4.7	-16.0	-5.3
German Democratic Republic	2.0	4.0	5.4	5.5	3.9	3.3	3.1	2.4	♦ -25.1	-	-
Hungary	2.8	0.7	2.7	-0.3	1.5	3.8	2.7	3.8	-4.0	-8.0	–
Poland	-4.8	5.6	5.6	3.6	4.2	2.0	4.4	0.2	-12.0	-9.3	3.0
Romania	4.0	6.1	5.9	-0.1	2.4	0.8	-0.5	-5.8	-8.2	-13.0	-9.6

Sources: UN/DESD and ECE.

♦ Indicates discontinuity in the series.

Table A.4. Developing countries: rates of growth of real GDP, by country group, 1982-1992
(Annual percentage change)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]	1992[b]
All developing countries	3.5	1.8	4.1	3.5	3.8	3.9	4.4	3.3	3.2	3.4	4.5
by region:											
Latin America	-1.0	-2.6	3.8	3.6	4.2	3.0	0.7	1.1	-0.1	2.6	3.0
Africa	3.9	1.4	0.8	5.0	1.9	0.2	2.3	2.7	3.1	3.1	3.5
West Asia	8.4	-0.9	-1.3	-3.6	-3.0	-1.7	-0.5	2.3	1.6	–	4.0
South and East Asia	3.6	6.0	5.7	3.6	6.2	6.9	8.5	6.1	6.3	5.4	5.5
Mediterranean	2.5	0.9	3.7	2.7	5.4	3.5	1.3	1.0	1.1	-7.0	2.5
China[c]	8.8	10.2	14.5	13.0	7.8	9.4	10.9	3.6	5.2	7.0	7.0
by analytical grouping:											
Capital-surplus countries	8.9	-1.1	-2.3	-4.8	-4.4	-2.2	-1.5	2.3	1.3	-0.5	4.0
Capital-importing countries	3.0	0.9	2.9	2.3	3.2	3.1	3.5	3.4	3.0	3.3	4.0
Net energy exporters	4.9	-0.5	0.8	–	-1.1	–	1.6	2.7	3.6	2.7	4.5
Net energy importers	1.5	2.1	4.7	4.0	6.4	5.3	4.7	3.9	2.7	3.7	4.0
Four recent surplus economies	4.5	8.5	8.9	3.8	11.0	11.7	9.6	6.2	6.9	7.4	6.5
Other	0.9	0.7	3.7	4.1	5.3	3.7	3.4	3.2	1.4	2.5	3.0
Memo items:											
Sub-Saharan Africa	2.8	0.6	1.2	1.9	2.6	0.6	2.9	2.1	1.3	0.7	2.0
Fifteen heavily indebted countries	-0.4	-2.7	2.7	3.4	4.1	2.4	1.2	1.3	-0.3	1.3	2.5

Source: UN/DESD.

a Preliminary estimates.
b Forecast, based in part on Project LINK. Estimates are rounded to the nearest half percentage point.
c Net material product until 1984; data for 1981-1989 are government estimates.

Table A.5. Developed market economies: investment, saving and net transfers, 1980-1990
(Percentage of GDP)

		Gross domestic investment	Gross domestic saving			Net financial transfer
			Total	Government saving	Private saving	
Total[a]	1980	23.0	22.3	0.9	21.3	0.8
	1985	20.7	20.4	-0.7	21.0	0.4
	1986	20.7	20.9	-0.4	21.3	-0.2
	1987	20.9	20.9	0.5	20.4	..
	1988	22.0	22.0	1.1	20.8	..
	1989	22.3	22.2	1.6	20.6	0.1
	1990	21.9	21.9	..	..	-0.1
Major industrial countries[a]	1980	22.8	22.3	0.8	21.4	0.5
	1985	20.7	20.1	-0.8	21.0	0.5
	1986	20.6	20.7	-0.6	21.3	..
	1987	20.8	20.7	0.4	20.3	0.1
	1988	21.8	21.7	1.0	20.7	0.1
	1989	22.0	21.9	1.6	20.3	0.1
	1990	21.6	21.6	..	..	..
Germany	1980	23.4	22.9	2.5	20.4	0.5
	1985	19.6	23.1	2.7	20.4	-3.5
	1986	19.6	24.7	2.4	22.3	-5.2
	1987	19.4	24.4	1.8	22.6	-5.0
	1988	20.0	25.3	1.4	23.9	-5.2
	1989	21.3	26.7	3.8	22.9	-5.4
	1990	22.0	27.5	..	..	-5.5
Japan	1980	32.2	31.3	3.2	28.2	0.9
	1985	28.2	31.5	4.9	26.6	-3.4
	1986	27.8	31.8	4.7	27.0	-4.0
	1987	28.7	31.8	6.3	25.5	-3.2
	1988	30.6	32.9	7.5	25.4	-2.3
	1989	31.7	33.1	8.4	24.8	-1.4
	1990	33.2	33.9	..	..	-0.7
United States	1980	18.9	18.3	-0.1	18.4	0.6
	1985	18.7	15.6	-2.7	18.4	3.1
	1986	18.1	14.8	-3.1	17.9	3.3
	1987	17.3	14.0	-2.1	16.1	3.4
	1988	17.3	14.9	-2.1	17.0	2.4
	1989	17.1	15.3	-1.6	16.9	1.8
	1990	16.0	14.5	..	..	1.5

Source: OECD, *National Accounts*.

a National currency data converted to dollars for aggregation at annual average exchange rates.

Table A.6. Developed market economies: unemployment rates, 1982-1992[a]
(Percentage of total labour force)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]	1992[c]
All developed market economies	7.9	8.4	7.8	7.7	7.6	7.2	6.6	6.1	6.0	6.7	7.1
Major industrial countries	7.7	8.1	7.3	7.2	7.1	6.7	6.1	5.7	5.6	6.3	6.7
Canada	10.9	11.8	11.2	10.4	9.5	8.8	7.7	7.5	8.1	10.2	10.0
France	8.1	8.3	9.7	10.2	10.4	10.5	10.0	9.4	8.9	9.4	9.9
Germany	5.9	7.7	7.1	7.2	6.4	6.2	6.2	5.6	4.9	4.3	4.5
Italy	8.4	8.8	9.4	9.6	10.5	10.9	11.0	10.9	10.3	9.9	10.5
Japan	2.4	2.6	2.7	2.6	2.8	2.8	2.5	2.3	2.1	2.1	2.2
United Kingdom	11.3	12.4	11.7	11.2	11.2	10.3	8.5	7.1	6.9	9.4	10.3
United States	9.5	9.5	7.4	7.1	6.9	6.1	5.4	5.2	5.4	6.6	7.1
Other industrial countries	8.6	9.6	10.2	10.3	9.9	9.6	9.1	8.1	7.9	8.8	9.1
Memo item: European Community	9.2	10.1	10.5	10.6	10.6	10.3	9.7	8.8	8.3	8.6	9.1

Source: UN/DESD, based on data of OECD.

a For the 7 countries shown and 10 others, unemployment data are standardized by OECD for comparability among countries and over time, in conformity with the definitions of the International Labour Office (see OECD, *Standardized Unemployment Rates: Sources and Methods* (Paris, 1985)); national definitions and estimates are used for other countries.

b Partly estimated.

c Forecast, based on Project LINK.

Table A.7. Developed market economies: consumer price inflation, 1982-1992[a]
(Annual percentage change)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]	1992[c]
All developed market economies	7.0	4.8	4.8	4.2	2.5	3.1	3.4	4.6	5.2	4.5	3.8
Major industrial countries	6.5	4.3	4.4	3.8	1.9	2.7	3.1	4.4	4.8	4.2	3.4
Canada	10.8	5.9	4.3	4.0	4.2	4.3	4.1	5.0	4.8	5.6	4.0
France	11.8	9.6	7.5	5.7	2.5	3.3	2.7	3.5	3.4	3.1	2.8
Germany	5.2	3.4	2.4	2.2	-0.1	0.2	1.3	2.8	2.7	3.5	3.5
Italy	16.5	14.6	10.9	9.2	5.8	4.7	5.1	6.3	6.4	6.4	5.5
Japan	2.7	1.8	2.3	2.0	0.6	0.1	0.7	2.3	3.1	3.3	2.4
United Kingdom	8.6	4.5	5.0	6.0	3.4	4.2	4.9	7.8	9.5	5.9	4.7
United States	6.2	3.2	4.3	3.5	1.9	3.7	4.0	4.8	5.4	4.3	3.4
Other industrial countries	10.0	8.3	7.2	6.9	6.0	5.4	5.2	6.2	7.0	6.3	6.0

Source: UN/DESD, based on IMF, *International Financial Statistics*.

a Data for country groups are weighted averages where weights for each year are consumption expenditure for the year valued at 1988 prices and exchange rates.

b Partly estimated.

c Forecast, based on Project LINK.

Table A.8. Major developed market economies: financial indicators, 1981-1991

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Growth of real money[a] (percentage change)											
Canada	8.2	-3.4	-5.6	2.8	2.7	5.4	3.9	5.4	8.4	4.6	2.6
France	-0.7	-0.7	1.1	1.1	1.0	2.3	3.5	2.6	-0.8	-0.3	-2.4
Germany	0.0	2.5	2.2	3.5	5.3	3.1	4.0	4.2	2.4	14.7	2.4
Italy	-7.7	1.0	-3.7	1.9	2.1	1.6	2.4	2.0	5.3	2.2	2.8
Japan	6.8	5.8	5.5	4.5	7.2	7.5	11.1	9.5	9.6	6.4	0.4
United Kingdom	12.5	5.6	4.7	6.6	5.2	18.4	15.4	10.7	12.1	4.3	-4.7
United States	-4.8	2.4	11.8	4.4	5.7	6.1	0.8	2.1	-0.5	-0.9	-0.3
Short-term interest rates[b] (percentage)											
Canada	12.8	10.4	9.1	10.1	9.8	8.2	8.5	10.4	12.1	11.6	7.4
France	15.3	14.9	12.5	11.7	9.9	7.7	8.0	7.5	9.1	9.9	9.5
Germany	11.3	8.7	5.4	5.5	5.2	4.6	3.7	4.0	6.6	7.9	8.8
Italy	19.6	20.2	18.4	17.3	15.3	13.4	11.5	11.3	12.7	12.4	12.2
Japan	7.4	6.9	6.4	6.1	6.5	4.8	3.5	3.6	4.9	7.2	7.5
United Kingdom	13.1	11.4	9.1	7.6	10.8	10.7	9.7	10.3	13.9	14.7	11.7
United States	16.4	12.3	9.1	10.2	8.1	6.8	6.7	7.6	9.2	8.1	5.7
Long-term interest rates[c] (percentage)											
Canada	15.2	14.3	11.8	12.8	11.0	9.5	10.0	10.2	9.9	10.9	9.8
France	15.8	15.7	13.6	12.5	10.9	8.6	9.4	9.1	8.8	10.0	9.1
Germany	10.4	9.0	7.9	7.8	6.9	5.9	5.8	6.1	7.1	8.9	8.6
Italy	20.6	20.9	18.0	15.0	13.0	10.5	9.7	10.2	10.7	11.5	10.1
Japan	8.7	8.1	7.4	6.8	6.3	4.9	4.2	4.3	5.1	7.4	6.5
United Kingdom	14.7	12.9	10.8	10.7	10.6	9.9	9.5	9.4	9.6	11.1	9.9
United States	13.9	13.0	11.1	12.5	10.6	7.7	8.4	8.9	8.5	8.6	7.9
General government financial balances[d] (percentage)											
Canada	-1.5	-5.9	-6.9	-6.5	-6.8	-5.4	-3.8	-2.6	-3.1	-3.8	-5.2
France	-1.9	-2.8	-3.2	-2.8	-2.9	-2.7	-1.9	-1.8	-1.2	-1.7	-1.7
Germany	-3.7	-3.3	-2.5	-1.9	-1.1	-1.3	-1.9	-2.1	0.2	-2.5	-3.7
Italy	-11.6	-11.3	-10.7	-11.6	-12.5	-11.7	-11.0	-10.9	-10.1	-10.7	-10.1
Japan	-3.8	-3.6	-3.6	-2.1	-0.8	-0.9	0.5	1.5	2.4	2.7	2.3
United Kingdom	-2.6	-2.4	-3.3	-3.9	-2.7	-2.3	-1.2	1.2	1.3	-0.7	-2.1
United States	-1.0	-3.5	-3.8	-2.8	-3.3	-3.4	-2.4	-2.0	-1.7	-2.4	-2.7

Source: UN/DESD, based on IMF, *International Financial Statistics*, and OECD, *Economic Outlook*.

[a] Real money is defined here as broad money (denoted M2 and comprising currency outside banks and demand deposits plus time, savings and foreign currency deposits of resident sectors other than central Government) deflated by GDP deflators. Growth rates measure changes from year-end to year-end (1991 data are partly estimated).

[b] Money market rates.

[c] Yield on long-term government bonds.

[d] Surplus (+) or deficit (-) as a percentage of nominal GNP or GDP.

Table A.9. Major developed market economies: effective exchange rates, 1981-1991
(1985=100)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
					Nominal effective exchange rates: global[a]						
Canada	106.0	106.3	108.4	104.3	100.0	93.1	92.6	97.7	103.1	102.9	104.7
France	115.2	106.5	100.3	98.1	100.0	103.9	102.9	101.1	100.1	104.4	102.9
Germany	88.8	93.4	98.4	98.2	100.0	110.0	115.1	114.8	114.0	119.6	118.5
Italy	118.1	110.6	108.5	104.4	100.0	102.8	99.7	97.2	98.2	100.0	98.7
Japan	89.1	83.8	92.1	96.5	100.0	132.0	141.5	153.8	143.9	132.3	142.9
United Kingdom	114.9	110.5	103.3	99.1	100.0	93.3	89.2	94.4	91.6	90.0	91.0
United States	80.2	88.0	92.2	97.3	100.0	84.5	72.8	67.5	69.2	67.3	66.3
					Real effective exchange rates: industrial country partners[b]						
Canada	96.0	99.0	103.7	103.2	100.0	93.6	99.1	111.2	127.7	135.6	145.3
France	110.0	111.8	104.8	99.8	100.0	99.4	97.1	94.8	92.7	96.7	93.7
Germany	95.6	96.7	99.4	98.3	100.0	111.3	121.2	122.0	120.2	126.7	126.5
Italy	92.7	92.5	97.8	100.8	100.0	100.5	102.8	101.7	109.5	115.7	115.8
Japan	102.5	91.4	97.2	100.6	100.0	122.7	127.9	136.9	130.0	114.3	120.3
United Kingdom	121.9	114.5	105.5	101.0	100.0	94.1	93.8	99.5	98.7	100.7	104.4
United States	80.6	91.0	93.1	98.5	100.0	79.1	67.3	62.3	63.4	57.5	56.1

Sources: IMF, *International Financial Statistics*, and OECD, *Economic Outlook*.

a Weights based on manufactures trade with 23 OECD countries and 6 non-OECD areas (rebased from 1970 first quarter = 100).

b Based on relative normalized unit labour costs in 16 industrial countries.

Table A.10. Eastern Europe and the Soviet Union: output and demand indicators, 1981-1991
(Annual percentage change)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Industry, gross product											
Bulgaria	5.4	4.6	4.3	4.2	3.2	4.7	6.0	3.2	-0.3	-12.6	-27.3
Czechoslovakia	2.1	1.1	2.8	3.9	3.5	3.2	2.5	2.1	0.8	-3.5	-23.1
German Democratic Republic	4.7	3.2	4.2	4.2	4.4	3.7	3.1	3.2	2.3	-28.1	♦ -
Hungary	2.4	2.5	1.2	3.2	0.7	1.9	3.5	-0.3	-2.5	-4.5	-19.1
Poland	-10.8	-2.1	6.4	5.2	4.5	4.7	3.4	5.3	-0.5	-24.2	-11.9
Romania	2.8	1.0	4.7	6.7	3.9	7.3	2.4	3.1	-2.1	-19.0	-18.7
Eastern Europe	-0.5	1.1	4.4	4.9	3.9	4.6	3.2	3.3	-0.1	-18.9	♦ -18.7
USSR	3.4	2.9	4.2	4.1	3.4	4.4	3.8	3.9	1.7	-1.2	-7.8
Eastern Europe and the USSR	2.3	2.4	4.3	4.3	3.5	4.5	3.6	3.7	1.2	-6.2	♦ -9.9
Agriculture, gross product											
Bulgaria	6.4	5.3	-6.6	7.2	-11.9	11.7	-3.5	0.9	1.2	-8.6	-6.4
Czechoslovakia	-2.5	4.4	4.2	4.4	-1.6	0.6	0.9	2.9	1.8	-3.5	-8.8
German Democratic Republic	1.5	-4.1	3.9	6.6	3.9	0.0	-0.3	-2.1	1.6	-30.0	♦ -
Hungary	2.0	7.3	-2.7	2.9	-5.5	2.4	-2.0	4.3	-1.3	-3.8	-3.0
Poland	3.8	-2.8	3.3	5.7	0.7	5.0	-2.3	1.2	1.5	-2.2	-2.0
Romania	-0.4	6.9	0.0	13.3	0.7	-5.5	-8.9	5.8	-5.0	-2.9	1.2
Eastern Europe	1.9	1.5	1.2	6.8	-0.9	1.8	-2.8	2.0	0.1	-7.8	♦ -3.0
USSR	-1.1	5.7	6.3	-0.2	0.1	5.3	-0.5	1.7	1.3	-2.8	-7.0
Eastern Europe and the USSR	-0.1	4.3	4.6	2.1	-0.2	4.1	-1.3	1.8	0.9	-4.4	♦ -5.8
Gross investment											
Bulgaria	5.5	3.7	0.0	1.7	6.2	13.7	0.3	4.5	-10.1	-12.0	-50.0
Czechoslovakia	-4.6	-2.3	0.6	-4.2	5.4	1.4	4.4	4.1	1.6	7.7	-30.0
German Democratic Republic	2.4	-5.1	-0.3	-4.9	3.4	5.3	8.0	7.3	0.9	-5.7	♦ -
Hungary	-4.7	-1.6	-3.4	-3.7	-3.0	6.5	9.8	-9.1	5.6	-8.7	-11.0
Poland	-22.3	-12.1	9.4	11.4	6.0	5.1	4.2	5.4	-2.4	-10.1	-8.0
Romania	-7.1	-3.1	2.4	6.0	1.6	1.1	-1.4	-2.2	-1.5	-38.3	-16.8
Eastern Europe	-7.6	-4.4	2.2	2.4	3.6	4.5	3.2	2.4	-1.4	-13.6	♦ -21.4
USSR	3.7	3.5	5.6	1.9	3.0	8.3	5.7	6.2	4.7	0.6	-7.0
Eastern Europe and the USSR	0.1	1.2	4.7	2.1	3.2	7.3	5.0	5.2	3.2	-2.8	♦ -10.8

Table A.10 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Export volume											
Bulgaria	8.3	11.4	4.5	4.7	7.4	-3.7	1.8	2.4	-2.3	-24.2	-30.0
Czechoslovakia	0.3	6.1	5.7	9.5	2.6	1.2	3.4	3.2	-2.0	-4.2	-20.0
German Democratic Republic	9.8	6.2	12.0	2.3	2.3	-4.5	-0.1	0.2	0.5	–	♦ -
Hungary	2.6	7.3	9.4	5.8	-0.3	-2.2	3.9	5.0	0.3	-4.3	-10.7
Poland	-19.0	8.7	10.3	9.5	1.3	4.9	4.8	9.1	0.2	13.7	-1.4
Romania	11.3	-8.3	3.2	15.9	0.3	0.2	-4.3	7.4	-10.8	-46.0	-30.0
Eastern Europe	2.7	5.3	8.0	7.0	2.5	-1.2	1.4	3.6	-1.9	-7.9	♦ -16.1
USSR	1.9	4.5	3.3	2.5	-4.3	10.0	3.3	4.8	–	13.1	-25.0
Eastern Europe and the USSR	2.3	4.9	5.5	4.6	-1.0	4.4	2.4	4.3	-0.9	-10.7	-21.1
Import volume											
Bulgaria	9.3	3.1	5.2	2.2	10.5	3.9	-1.4	5.3	-4.6	-24.2	-50.0
Czechoslovakia	-6.9	2.9	2.1	0.3	4.6	2.7	4.3	2.9	2.7	9.7	-35.0
German Democratic Republic	-1.7	-6.2	7.2	4.8	4.1	2.9	9.0	4.7	2.4	-15.0	♦ -
Hungary	0.1	-0.1	3.9	0.1	1.1	2.1	3.2	-1.9	1.1	-3.4	-2.3
Poland	-16.9	-13.7	5.2	8.6	7.9	4.9	4.5	9.4	1.5	-17.9	39.0
Romania	-7.2	-22.4	-3.8	10.5	8.5	18.3	-6.3	-5.8	3.7	4.0	-5.0
Eastern Europe	-4.3	-5.3	4.0	3.9	5.8	4.8	3.4	3.3	1.2	-8.6	♦ -14.7
USSR	6.4	9.7	4.0	4.4	4.7	-6.0	-1.6	4.0	9.3	-1.4	-40.0
Eastern Europe and the USSR	0.4	1.7	4.0	4.1	5.3	-0.6	1.0	3.6	5.0	-5.1	-27.4

Sources: UN/DESD and ECE, based on national data.

♦ Indicates discontinuity in the series.

a Preliminary estimate.

Table A.11. Eastern Europe and the Soviet Union: inflation and real wages, 1981-1991[a]
(Annual percentage change)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Bulgaria											
Consumer prices[b]	0.4	0.3	1.4	0.7	1.7	2.7	2.7	2.4	6.2	19.3	249.8
Real wages	4.8	2.5	-0.1	3.2	1.4	1.6	4.3	3.7	-1.2	-10.6	-45.0
Czechoslovakia											
Consumer prices[c]	0.9	4.7	1.1	0.9	1.3	0.4	0.1	0.2	1.5	9.9	57.9
Real wages	0.6	-2.3	0.7	0.8	0.3	1.1	1.9	2.1	0.8	-5.6	-24.0
German Democratic Republic											
Consumer prices[d]	0.2	–	–	–	–	-0.2	0.5	2.2	2.3	-2.5	-
Real wages	2.2	1.9	1.3	2.0	-4.1	3.7	4.9	0.7	0.2	..	-
Hungary											
Consumer prices	4.6	6.9	7.3	8.3	7.0	5.3	8.6	15.5	18.8	28.9	35.2
Real wages	1.7	-0.4	-2.3	3.6	2.6	1.9	-0.4	12.1	-4.3	-3.8	-5.0
Poland											
Consumer prices[e]	24.4	101.5	23.0	15.8	14.4	17.3	25.5	59.0	259.5	584.7	70.3
Real wages	2.4	-24.9	1.2	0.5	3.8	2.7	-3.5	14.4	8.3	-27.3	2.0
Romania											
Consumer prices[b]	1.9	16.9	5.3	1.1	0.4	0.3	0.4	1.7	0.9	5.7	305.5
Real wages	2.6	-7.7	-2.2	5.5	1.5	0.7	0.2	0.9	3.1	11.6	-28.3
Soviet Union											
Consumer prices[b,f]	1.4	3.4	0.7	-1.3	0.8	1.9	1.9	2.3	1.9	5.3	196.0
Real wages	0.7	-0.6	1.1	3.8	2.2	0.9	1.8	5.9	7.3	6.6	-10.2

Sources: UN/DESD and ECE.

a Gross remuneration of full-time workers and employees in the socialist sector, excluding cooperative farmers, deflated by the consumer price index.

b Retail prices in the State sector.

c Cost of living index for workers and employees.

d Including fees and charges of various kinds (1985 weights).

e Cost of living index for workers and employees in the socialist sector.

f Including public catering; based on rounded index numbers; approved "list price" changes only for 1970-1987.

Table A.12. Developing countries: investment, saving and net transfers, 1980-1990
(Percentage of GDP)

Country and grouping	Gross domestic investment				Gross domestic saving				Net transfer of resources			
	1980	1985	1989	1990	1980	1985	1989	1990	1980	1985	1989	1990
All developing countries	24.5	20.8	23.8	23.2	26.0	22.2	25.2	23.4	-1.5	-1.4	-1.4	-0.2
by region:												
Latin America	24.1	17.5	21.7	18.6	22.7	22.4	24.9	21.0	1.4	-4.8	-3.2	-2.3
Africa	23.4	18.5	20.4	21.3	22.5	16.8	15.8	19.4	0.9	1.7	4.6	1.9
West Asia	21.7	21.9	19.9	19.8	50.9	22.3	22.7	17.2	-29.2	-0.4	-2.8	2.6
South and East Asia	26.9	24.7	27.3	28.6	24.5	24.9	28.6	28.4	2.4	-0.1	-1.4	0.3
Mediterranean	22.5	21.5	23.3	23.3	14.4	17.8	21.7	18.9	8.2	3.7	1.5	4.4
by analytical grouping:												
Capital-surplus countries	20.9	21.8	21.6	20.9	57.3	23.7	26.5	18.4	-36.4	-1.9	-4.9	2.5
Capital-importing countries	24.5	20.8	23.8	23.2	26.4	22.3	25.3	23.6	-1.8	-1.6	-1.5	-0.4
Energy exporters	24.9	21.8	23.6	22.6	35.7	25.0	26.1	24.9	-10.8	-3.3	-2.5	-2.4
Energy importers	24.3	20.0	23.9	23.4	19.4	20.3	25.0	23.1	4.9	-0.3	-1.1	0.4
Recent surplus economies	34.3	26.1	29.6	31.3	29.1	31.5	35.2	34.0	5.2	-5.4	-5.6	-2.7
Other countries	22.7	18.5	21.8	20.7	17.8	17.6	21.3	19.2	4.9	0.9	0.5	1.4
Memo items:												
Sub-Saharan Africa	18.8	15.7	16.2	15.9	11.3	11.7	10.0	9.5	7.5	4.0	6.2	6.5
Fifteen heavily indebted countries	24.1	16.3	21.4	18.6	23.5	21.1	24.7	21.2	0.5	-4.8	-3.3	-2.6
Selected developing countries												
Argentina	22.2	8.5	9.0	8.9	20.0	15.2	17.0	15.6	2.2	-6.6	-8.0	-6.7
Bangladesh	14.9	12.8	12.2	11.6	2.1	1.9	2.0	1.9	12.8	10.9	10.2	9.7
Brazil	23.3	17.0	24.8	21.1	21.1	22.0	28.3	22.6	2.2	-5.0	-3.5	-1.4
China	32.2	40.1	39.0	39.0	32.2	36.1	38.4	42.5	0.0	4.1	0.7	-3.5
Côte d'Ivoire	28.2	12.6	8.5	7.7	22.2	25.8	11.5	13.9	6.1	-13.2	-3.0	-6.1
Egypt	27.5	26.7	23.6	23.1	15.2	14.5	6.9	9.9	12.4	12.1	16.8	13.2
India	22.8	25.4	23.6	23.1	19.2	22.3	20.9	20.3	3.6	3.1	2.7	2.8
Indonesia	24.3	28.0	34.7	36.4	37.1	29.8	37.2	37.7	-12.8	-1.8	-2.5	-1.2
Kenya	29.2	26.0	25.1	22.8	18.1	24.9	19.3	17.5	11.1	1.1	5.7	5.3
Mexico	27.2	21.2	22.8	18.7	24.9	26.3	23.7	18.2	2.3	-5.1	-0.9	0.5
Nigeria	20.5	7.5	12.5	15.8	29.5	10.8	21.0	35.0	-9.1	-3.3	-8.4	-19.2
Peru	27.5	21.6	20.6	22.9	27.5	26.3	21.7	23.2	–	-4.7	-1.1	-0.3
Republic of Korea	31.7	29.3	34.5	37.3	24.3	30.5	37.3	36.7	7.4	-1.3	-2.8	0.6
Sudan	15.1	4.5	9.1	9.2	3.4	-3.8	2.2	2.6	11.6	8.4	6.9	6.6
Thailand	26.4	24.0	31.1	36.8	20.1	21.2	28.7	33.6	6.3	2.8	2.3	3.2
Tunisia	29.4	26.6	22.7	26.7	24.0	20.4	18.6	20.0	5.4	6.1	4.1	6.7
Turkey	21.9	21.0	22.7	23.1	14.1	17.8	21.7	18.7	7.8	3.2	1.0	4.4
United Republic of Tanzania	23.0	15.7	19.4	19.7	9.8	7.4	-10.4	-14.4	13.2	8.3	29.8	34.4
Zambia	23.3	14.9	8.7	14.7	19.3	15.4	13.1	14.1	4.0	-0.5	-4.4	0.6

Source: UN/DESD, based on World Bank, *World Tables*, and Secretariat estimates.

Table A.13. Developing countries: structure of trade in goods and services, 1980-1988
(Percentage)

Country and grouping	Share in total exports of goods and services of:											
	Manufactures			Non-fuel primary commodities			Travel receipts and remittances			Fuels trade balance		
	1980	1985	1988	1980	1985	1988	1980	1985	1988	1980	1985	1988
All developing countries	20.9	32.9	48.1	18.2	17.4	17.7	6.9	7.7	9.8	37.9	17.6	10.0
by region:												
Latin America	13.8	18.5	28.0	31.9	29.0	33.4	5.9	6.2	7.9	14.0	19.3	9.0
Africa	5.0	7.2	13.9	24.2	22.9	30.3	9.5	12.4	17.7	48.3	42.7	24.4
West Asia	4.8	9.5	17.9	1.3	2.6	4.2	2.6	3.3	3.7	79.0	50.7	39.4
South and East Asia	46.5	56.6	66.4	22.1	15.3	13.4	7.5	7.1	9.4	-5.9	-3.6	-2.4
Mediterranean	40.8	51.4	47.0	22.8	17.5	17.3	44.1	27.2	30.5	-36.5	-23.8	-12.7
by analytical grouping:												
Capital-surplus countries	2.2	4.3	10.6	0.4	1.2	2.2	1.0	0.1	0.2	87.0	60.9	50.8
Capital-importing countries	20.1	32.3	46.9	17.9	17.2	17.8	7.2	7.9	10.3	33.6	11.0	7.6
Energy exporters	3.7	8.3	19.3	7.7	9.1	12.8	3.8	4.9	7.1	78.8	61.5	44.6
Energy importers	40.8	50.4	58.5	30.8	23.2	19.9	11.4	10.1	11.6	-21.5	-23.9	-5.8
Recent surplus economies	67.3	73.5	77.2	10.0	7.6	6.9	4.1	4.0	7.9	-13.5	-9.3	-4.0
Other countries	25.1	32.0	36.9	43.1	35.8	34.8	15.7	15.1	15.8	-26.0	-32.1	-7.0
Memo items:												
Sub-Saharan Africa	8.1	9.7	13.7	58.2	52.0	55.2	5.7	6.7	7.3	-1.3	3.2	-1.4
Fifteen heavily indebted countries	15.4	22.3	31.8	28.1	26.6	30.3	8.5	7.9	10.7	22.2	20.7	9.3
Selected developing countries												
Argentina	16.6	17.4	20.4	52.5	58.0	57.4	3.1	5.1	5.6	-7.2	1.5	-2.1
Bangladesh	52.2	50.7	55.2	25.5	23.9	23.4	21.8	31.7	48.7	-42.6	-31.3	-17.8
Brazil	33.4	39.1	44.3	51.4	42.7	44.6	0.6	0.2	0.3	-44.6	-17.5	-8.5
China	43.1	42.7	64.7	25.0	21.5	17.2	–	3.7	3.6	20.7	22.2	5.5
Côte d'Ivoire	8.1	8.3	10.0	73.0	76.4	69.0	2.2	1.1	2.4	-8.7	-3.7	-7.8
Egypt	5.5	6.8	12.8	11.0	8.3	6.8	46.4	40.1	47.0	47.6	42.4	28.7
India	41.9	45.5	57.9	25.3	20.7	18.9	35.1	23.4	22.3	-49.6	-25.8	-12.9
Indonesia	2.4	12.2	26.1	25.4	18.6	25.6	0.8	3.0	6.5	60.6	43.7	27.0
Kenya	10.2	7.7	9.7	35.6	44.1	38.0	11.6	15.5	20.9	-21.0	-19.0	-14.3
Mexico	10.2	15.7	36.3	12.6	9.6	8.8	15.1	10.4	13.4	45.4	47.5	19.5
Nigeria	0.5	0.6	2.0	3.4	2.0	8.8	0.3	0.3	0.7	88.4	87.2	77.4
Peru	13.8	16.2	15.3	50.8	43.0	51.4	6.1	7.6	11.0	14.8	15.4	4.7
Republic of Korea	69.6	83.6	79.7	7.6	5.1	5.1	1.6	2.4	4.4	-29.2	-19.3	-7.6
Sudan	1.8	3.4	5.5	69.5	66.0	65.7	31.7	60.4	49.8	-22.3	-31.5	-23.4
Thailand	22.0	27.4	37.7	53.4	41.3	34.9	10.1	11.4	14.3	-33.0	-19.5	-9.7
Tunisia	23.9	29.0	35.7	7.8	8.4	11.0	29.9	30.6	43.7	13.3	14.7	3.2
Turkey	21.3	45.4	42.1	56.8	23.8	22.2	65.3	24.7	23.1	-98.8	-29.0	-14.5
United Republic of Tanzania	12.0	10.4	14.8	62.3	47.4	66.0	4.2	15.0	6.8	-33.7	-55.8	-35.2
Zambia	0.8	2.3	2.0	81.9	90.5	92.5	1.3	0.9	0.4	-11.0	-15.8	-5.6

Source: UN/DESD, based on World Bank, *World Tables*, and Secretariat estimates.

Table A.14. Developing countries: inflation, 1981-1991[a]
(Annual percentage change)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
All developing countries	29.4	27.1	44.5	58.9	75.8	33.7	48.5	113.1	295.8	477.0	71.5
by region:											
Latin America	65.5	71.5	134.6	170.6	249.2	96.7	145.4	376.0	1 002.5	1 746.8	227.9
Africa	16.3	12.2	16.7	18.2	11.0	13.3	13.0	19.6	22.1	18.6	29.4
West Asia	34.4	25.7	30.4	56.6	43.1	17.2	19.8	18.9	15.5	8.1	13.5
South and East Asia	10.8	5.6	5.6	6.5	6.8	5.4	6.6	11.4	9.6	6.2	8.2
Mediterranean	34.0	31.7	34.4	48.4	55.5	58.1	74.0	125.6	589.6	292.8	86.1
China	2.6	2.0	1.9	2.8	11.9	7.0	8.8	20.7	16.3	2.2	3.0
by analytical grouping:											
Capital-surplus countries	16.7	12.7	12.9	7.6	2.0	10.8	17.8	18.5	14.7	5.6	13.0
Capital-importing countries	30.5	28.3	47.3	63.6	82.2	35.7	51.2	121.4	320.6	518.7	76.7
Energy exporters	19.5	23.8	34.5	29.3	83.3	29.8	41.8	60.2	140.0	275.9	30.2
Energy importers	35.0	30.2	52.5	78.3	81.8	38.2	55.0	146.4	393.4	617.0	95.7
Recent surplus economies	17.9	6.3	3.7	3.7	1.7	2.0	2.5	5.1	5.7	7.3	8.2
Other	38.5	35.1	62.5	89.2	98.2	45.6	65.7	175.4	472.9	742.5	113.6
Memo items:											
Sub-Saharan Africa	21.5	16.7	24.0	16.9	13.2	13.2	16.2	20.2	25.5	37.6	61.0
Fifteen heavily indebted countries	60.1	64.6	120.5	155.0	221.6	89.0	134.1	339.3	947.7	1 571.2	205.8

Source: UN/DESD, based on IMF, *International Financial Statistics*, and Secretariat estimates.

a Weights used are GDP in 1988 dollars.
b Preliminary estimates based on data for part of the year.

Table A.15. Selected developing countries or areas: real effective exchange rates, 1981-1991
(1980-1982 = 100)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Argentina	107.5	77.0	71.6	80.2	71.0	61.1	53.7	59.8	50.0	58.8	69.1
Brazil	103.2	113.0	86.0	85.7	85.2	75.0	74.4	81.4	98.3	117.8	90.5
Chile	108.1	97.3	89.3	90.1	79.6	68.8	65.6	60.8	62.3	60.0	65.0
Colombia	100.6	105.7	105.0	99.7	85.5	67.9	63.6	61.4	60.7	55.5	56.1
Mexico	114.1	82.7	79.0	91.9	87.4	62.9	64.6	77.2	74.0	69.2	75.3
Peru	105.0	105.7	98.3	106.1	96.7	97.0	108.2	125.0	138.3	178.1	172.3
Venezuela	99.6	110.2	117.3	85.9	93.0	90.7	65.3	71.9	62.0	52.4	51.7
Hong Kong	99.4	101.4	94.9	99.5	103.6	94.0	90.0	90.6	98.6	98.9	106.1
Indonesia	99.7	111.7	96.2	96.0	94.7	73.6	56.1	53.8	55.3	54.4	54.4
Malaysia	99.3	105.6	113.9	119.6	116.3	95.5	89.6	80.0	79.4	75.8	75.6
Philippines	101.2	106.7	96.1	107.9	114.7	91.0	87.7	89.4	95.4	88.5	87.2
Republic of Korea	101.2	101.9	97.6	96.5	89.4	76.4	75.7	82.2	92.2	84.9	83.3
Singapore	101.9	100.8	101.8	102.5	95.7	81.0	74.6	73.2	78.1	80.5	83.0
Taiwan Province of China	102.6	96.6	94.6	97.1	94.2	86.4	91.8	95.2	100.8	93.8	92.7
Thailand	101.6	102.9	104.2	102.6	91.8	78.2	73.7	74.6	77.1	74.6	79.5
Israel	99.2	108.7	120.8	119.5	106.6	101.0	97.7	107.2	109.5	103.2	104.9
Turkey	101.4	90.8	85.9	77.3	77.0	79.1	83.0	91.1	97.9	116.9	114.8

Source: Morgan Guaranty Trust Company, *World Financial Markets*, various issues.

Note: The real effective exchange rate, which adjusts the nominal index for relative price changes, gauges the effect on the international price competitiveness of the country's manufactures due to currency changes and differential inflation. The relative price changes are based on indices most closely measuring the prices of domestically produced finished manufactured goods, excluding food and energy at the first stage of manufacturing. The weights for currency indices are derived from 1980 bilateral trade patterns of the corresponding countries.

II. INTERNATIONAL TRADE

Table A.16. Direction of trade: exports, 1980-1990

Destination Origin		World	Developed market economies	Eastern Europe and the Soviet Union	Developing countries total	Latin America	Africa	West Asia	South and East Asia	Other[a] Asia
		Billions of dollars	Percentage							
World	1980	**2 000.9**	66.8	7.2	25.2	6.3	4.2	4.8	7.6	1.1
	1985	**1 933.4**	66.4	7.8	24.6	4.8	3.3	4.6	8.6	2.2
	1989	**3 024.1**	70.3	5.7	23.1	4.1	2.3	3.0	10.6	2.0
	1990	**3 386.7**	72.0	4.3	22.4	3.9	2.3	2.9	10.9	1.7
Developed market economies	1980	**1 258.9**	70.8	3.4	25.1	6.1	5.2	5.3	6.7	1.1
	1985	**1 266.9**	74.0	2.7	22.2	4.5	3.6	4.5	7.0	2.0
	1989	**2 128.7**	76.9	2.3	19.9	4.0	2.4	2.8	9.0	1.2
	1990	**2 446.9**	77.4	2.1	19.3	3.8	2.3	2.8	8.9	0.9
Eastern Europe and the Soviet Union	1980	**155.1**	27.9	50.7	20.9	3.3	2.8	3.8	2.2	2.5
	1985	**172.2**	24.0	53.2	21.4	4.0	2.5	3.0	2.2	3.7
	1989	**194.0**	27.7	48.8	22.9	4.2	2.0	2.7	2.4	4.5
	1990	**172.5**	38.5	38.2	22.7	4.2	2.4	2.4	5.8	5.0
Developing countries	1980	**586.8**	68.4	3.9	26.5	7.6	2.6	4.0	11.1	0.7
	1985	**494.3**	61.6	5.3	31.8	5.7	2.7	5.5	14.7	2.4
	1989	**701.4**	62.1	4.1	32.7	4.5	2.3	4.0	18.0	3.6
	1990	**767.3**	62.5	3.9	32.5	4.2	2.2	3.5	18.6	3.5
of which: Latin America	1980	**107.8**	64.4	6.5	27.5	21.3	2.2	1.5	1.4	0.7
	1985	**109.2**	69.0	8.0	20.8	11.9	2.5	1.9	2.8	1.5
	1989	**123.5**	68.9	6.3	22.7	14.6	1.2	1.6	3.7	1.4
	1990	**131.5**	70.2	6.1	21.1	14.0	1.0	1.4	3.3	1.1
Africa	1980	**94.9**	82.9	2.6	13.7	6.2	3.1	1.9	1.2	0.3
	1985	**59.3**	80.4	4.1	14.3	3.9	5.0	2.0	1.7	0.3
	1989	**56.1**	79.2	3.9	15.5	1.4	6.9	3.1	2.6	0.7
	1990	**62.5**	79.7	4.3	14.8	1.6	6.6	3.0	2.4	0.5
West Asia	1980	**211.0**	71.6	1.6	25.4	5.6	1.7	5.3	12.2	0.1
	1985	**104.8**	50.2	2.5	46.3	8.8	2.9	13.6	20.0	0.1
	1989	**100.2**	55.8	3.7	39.6	6.4	3.2	12.2	16.7	0.2
	1990	**106.3**	63.5	3.3	32.5	5.4	2.8	9.6	13.9	0.2
South and East Asia	1980	**141.6**	62.2	2.5	34.3	2.6	3.0	5.3	21.3	1.7
	1985	**178.5**	62.7	2.0	34.0	1.7	2.0	4.1	20.6	5.2
	1989	**349.0**	63.5	1.2	34.6	1.5	1.7	2.8	21.8	6.4
	1990	**384.5**	61.5	1.2	36.2	1.6	1.8	2.8	23.2	6.4
Other Asia[a]	1980	**20.4**	43.5	13.1	43.4	1.8	5.6	4.9	30.6	–
	1985	**30.1**	39.2	12.6	48.2	2.2	1.9	6.0	36.3	1.7
	1989	**56.1**	34.8	10.9	53.2	1.0	1.3	2.4	47.4	1.0
	1990	**65.8**	35.1	10.2	54.6	1.0	1.3	2.5	48.8	1.0

Source: UNCTAD secretariat computations, based on data from the Statistical Office of the United Nations Secretariat.

[a] Including China, the Democratic People's Republic of Korea, Mongolia and Viet Nam.

Table A.17. Direction of trade: imports (f.o.b.), 1980-1990

Destination Origin		World	Developed market economies	Eastern Europe and the Soviet Union	Developing countries total	Latin America	Africa	West Asia	South and East Asia	Other[a] Asia
					Billions of dollars					
World	**1980**	**2 000.9**	**1 336.0**	**144.0**	**504.0**	**126.1**	**84.4**	**96.5**	**152.3**	**21.2**
	1985	**1 933.4**	**1 283.3**	**151.7**	**475.3**	**92.6**	**63.6**	**89.0**	**165.5**	**43.3**
	1989	**3 024.1**	**2 127.3**	**172.3**	**697.1**	**123.9**	**70.5**	**91.8**	**321.7**	**59.0**
	1990	**3 386.7**	**2 438.6**	**146.2**	**760.1**	**131.6**	**76.3**	**99.8**	**370.0**	**57.5**
					Percentage					
Developed market economies	1980	62.9	66.7	29.3	62.7	60.5	77.0	69.5	55.1	63.4
	1985	65.5	73.1	22.2	59.2	61.9	71.9	63.4	53.6	57.7
	1989	70.4	77.0	28.5	60.7	68.2	71.8	64.1	59.4	42.3
	1990	72.2	77.6	34.6	62.1	70.0	72.4	68.6	58.7	38.0
Eastern Europe and the Soviet Union	1980	7.8	3.2	54.7	6.4	4.1	5.2	6.0	2.2	18.6
	1985	8.9	3.2	60.4	7.8	7.5	6.8	5.9	2.3	14.6
	1889	6.4	2.5	54.9	6.4	6.5	5.6	5.6	1.4	14.7
	1990	5.1	2.7	45.1	5.1	5.5	5.4	4.1	2.7	14.9
Developing countries	1980	29.3	30.0	16.0	30.8	35.4	17.8	24.5	42.7	18.0
	1985	25.6	23.7	17.3	33.0	30.6	21.3	30.7	44.0	27.6
	1989	23.2	20.5	16.6	32.9	25.3	22.6	30.2	39.2	43.0
	1990	22.7	19.7	20.3	32.8	24.5	22.2	27.3	38.6	47.1
of which:										
Latin America	1980	5.4	5.2	4.8	5.9	18.2	2.8	1.6	1.0	3.4
	1985	5.6	5.9	5.8	4.8	14.1	4.3	2.3	1.9	3.9
	1989	4.1	4.0	4.5	4.0	14.6	2.1	2.1	1.4	2.9
	1990	3.9	3.8	5.5	3.6	14.0	1.8	1.9	1.2	2.6
Africa	1980	4.7	5.9	1.7	2.6	4.7	3.5	1.9	0.8	1.5
	1985	3.1	3.7	1.6	1.8	2.5	4.6	1.3	0.6	0.4
	1989	1.9	2.1	1.3	1.2	0.6	5.5	1.9	0.5	0.6
	1990	1.8	2.0	1.8	1.2	0.8	5.4	1.8	0.4	0.6
West Asia	1980	10.5	11.3	2.3	10.6	9.3	4.2	11.5	16.9	1.4
	1985	5.4	4.1	1.7	10.2	9.9	4.7	16.1	12.7	0.4
	1989	3.3	2.6	2.1	5.7	5.2	4.5	13.3	5.2	0.4
	1990	3.1	2.8	2.4	4.5	4.4	3.9	10.2	4.0	0.3
South and East Asia	1980	7.1	6.6	2.5	9.6	2.9	5.0	7.7	19.8	11.1
	1985	9.2	8.7	2.3	12.8	3.2	5.7	8.3	22.2	21.4
	1989	11.5	10.4	2.4	17.3	4.2	8.5	10.5	23.7	38.0
	1990	11.4	9.7	3.2	18.3	4.8	9.1	10.9	24.2	42.5
Other Asia[a]	1980	1.0	0.7	1.9	1.8	0.3	1.4	1.0	4.1	–
	1985	1.6	0.9	2.5	3.0	0.7	0.9	2.0	6.6	1.2
	1989	1.9	0.9	3.6	4.3	0.4	1.0	1.5	8.3	0.9
	1990	1.9	0.9	4.6	4.7	0.5	1.1	1.6	8.7	1.1

Source: UNCTAD secretariat computations, based on data from the Statistical Office of the United Nations Secretariat.

a Including data for China, the Democratic People's Republic of Korea, Mongolia and Viet Nam.

Table A.18. Commodity composition of world trade: exports, 1980-1989
(Billions of dollars and percentage)

Exporting country groups	TOTAL EXPORTS (billions of dollars)			Primary commodities											
				Food			Agricultural raw materials			Fuels			Ores and metals		
	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989
World (billions of dollars)	2 000.9	1 933.4	3 024.1	221.1	199.2	289.8	73.9	61.2	103.5	480.8	361.6	292.1	93.5	70.6	118.9
World				(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed market economies	1 258.9	1 266.9	2 128.7	64.4	61.1	66.3	61.2	64.5	66.7	18.3	27.9	27.2	67.5	64.5	66.9
Eastern Europe and the USSR	155.2	172.2	194.0	4.4	4.6	3.8	8.8	9.0	7.2	8.8	14.7	17.0	5.2	6.3	5.0
Developing countries	586.8	494.3	701.4	31.2	34.3	29.9	30.0	26.5	26.1	72.9	57.4	55.8	27.3	29.2	28.1
Latin America	107.8	109.2	123.5	14.2	15.8	12.1	4.6	4.0	4.7	9.5	11.0	9.6	10.9	13.3	12.2
Africa	94.9	59.3	56.1	4.6	3.9	2.9	4.0	3.9	2.9	14.9	11.5	10.5	6.0	4.7	4.1
West Asia	211.0	104.8	100.2	1.2	1.5	1.4	1.3	1.1	0.5	41.5	24.7	25.7	1.2	1.4	1.8
South and East Asia	141.6	178.5	349.0	8.0	9.5	10.1	17.1	13.7	14.4	6.3	8.2	8.4	6.4	6.5	6.6
China	20.4	30.1	56.1	2.3	2.6	2.7	2.1	3.1	2.8	0.6	2.0	1.5	1.2	1.9	1.6

Exporting country groups	Manufactures														
	Textiles			Chemicals			Machinery and transport			Metal manufactures			Other manufactures		
	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989
World (billions of dollars)	96.0	103.2	186.9	140.7	152.4	264.3	513.1	601.1	1 052.1	114.1	104.8	163.6	221.1	227.3	439.6
World	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed market economies	61.3	52.7	48.2	87.1	83.2	84.3	85.0	82.3	83.2	85.7	77.9	76.7	80.1	76.2	74.2
Eastern Europe and the USSR	5.0	4.6	2.8	5.5	7.1	4.5	9.0	8.3	4.7	6.8	8.2	6.6	5.2	4.6	3.4
Developing countries	33.7	42.7	49.0	7.4	9.7	11.2	6.0	9.4	12.1	7.5	13.9	16.7	14.7	19.2	22.4
Latin America	2.2	2.3	2.0	2.0	2.9	2.3	1.0	1.5	1.3	1.6	4.2	4.3	1.7	2.4	2.1
Africa	1.2	1.3	1.6	0.6	0.8	0.9	0.1	0.1	0.1	0.2	0.3	0.6	0.5	0.4	0.4
West Asia	1.5	2.8	3.0	1.0	0.9	1.1	0.3	0.4	0.2	0.4	1.5	1.1	0.6	0.9	0.8
South and East Asia	23.1	29.8	34.3	2.3	3.4	5.0	3.9	6.6	9.8	4.0	6.4	8.5	9.9	13.6	16.9
China	4.8	5.6	7.5	0.8	1.0	1.2	0.1	0.2	0.4	0.6	0.6	1.2	1.2	1.0	1.6

Source: UNCTAD secretariat computations, based on data from the Statistical Division of the United Nations Secretariat.

Table A.19. Commodity composition of world trade: imports, 1980-1989
(Billions of dollars and percentage)

Importing country groups	TOTAL IMPORTS (billions of dollars)			Primary commodities											
				Food			Agricultural raw materials			Fuels			Ores and metals		
	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989
World (billions of dollars)	2 000.9	1 933.4	3 024.1	221.1	199.2	289.8	73.9	61.2	103.5	480.8	361.6	292.1	93.5	70.6	118.9
World				(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed market economies	1 336.0	1 283.3	2 127.3	61.4	63.0	68.3	68.3	67.5	69.4	75.3	68.2	56.2	79.1	73.1	76.9
Eastern Europe and the USSR	155.2	172.2	194.0	11.3	11.2	8.0	7.7	7.8	6.1	5.8	10.2	21.7	7.7	9.3	4.3
Developing countries	504.0	475.3	697.1	27.3	25.8	23.7	24.0	24.7	24.5	18.9	21.6	22.1	13.2	17.6	18.8
Latin America	126.1	92.6	123.9	6.0	4.8	4.2	3.1	3.1	3.0	6.7	5.5	5.5	3.1	3.8	2.7
Africa	84.4	63.6	70.5	6.0	6.1	4.1	2.3	2.6	2.1	1.6	1.7	1.8	1.4	1.4	1.1
West Asia	96.5	89.0	91.8	5.6	6.1	4.9	2.1	2.1	1.8	2.0	2.5	2.5	1.5	1.8	1.8
South and East Asia	152.3	165.5	321.7	7.2	7.2	8.2	10.6	11.2	12.9	7.4	10.0	10.0	5.1	6.9	10.4
China	21.2	43.3	59.0	1.6	1.0	1.6	4.0	3.8	3.2	0.1	0.4	0.9	0.6	2.1	1.3

Importing country groups	Manufactures														
	Textiles			Chemicals			Machinery and transport			Metal manufactures			Other manufactures		
	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989	1980	1985	1989
World (billions of dollars)	96.0	103.2	186.9	140.7	152.4	264.3	513.1	601.1	1 052.1	114.1	104.8	163.6	221.1	227.3	439.6
World	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)
Developed market economies	69.7	70.8	71.9	63.8	65.1	68.3	59.5	65.6	71.6	56.3	56.9	66.6	72.2	73.9	76.5
Eastern Europe and the USSR	7.2	7.0	4.8	7.7	7.4	5.9	9.2	8.7	5.4	9.9	9.9	6.7	5.8	5.2	4.2
Developing countries	23.1	22.2	23.3	28.5	27.5	25.8	31.3	25.7	23.0	33.8	33.2	26.7	22.0	20.9	19.3
Latin America	3.6	2.4	2.6	8.0	6.6	5.3	7.8	5.2	4.5	6.4	3.5	3.6	4.9	3.6	3.1
Africa	4.4	2.5	2.2	4.7	3.6	2.6	6.2	3.7	2.4	6.4	5.0	3.1	3.9	2.6	1.8
West Asia	5.8	6.0	3.5	4.2	4.1	2.9	6.9	5.1	2.8	8.7	8.2	4.0	5.6	5.3	3.0
South and East Asia	7.4	8.0	11.3	8.8	9.5	11.6	8.2	8.0	10.9	8.6	8.5	11.1	6.2	7.3	9.6
China	1.0	2.4	2.8	1.4	2.5	2.5	1.2	3.0	1.9	2.2	6.6	3.6	0.6	1.5	1.4

Source: UNCTAD secretariat computations, based on data from the Statistical Division of the United Nations Secretariat.

a Including data for the Democratic Peoples's Republic of Korea, Mongolia and Viet Nam; China accounts for more than 90 per cent of the amounts shown.

Table A.20. World trade: changes in value and volume of exports and imports, by major country group, 1981-1991
(Annual percentage change)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Value of exports											
World	-0.2	-7.2	-2.0	5.8	1.2	9.9	17.1	13.5	7.9	14.0	2.0
Developed market economies	–	-5.5	-1.2	6.6	3.2	16.7	17.0	14.1	7.0	15.3	1.9
North America	8.9	-7.6	-1.8	11.3	-1.4	2.5	11.0	24.6	10.3	7.5	5.2
European Community	-7.0	-3.7	-2.6	2.6	5.4	22.9	20.4	10.9	6.7	20.9	-0.4
Japan	16.7	-8.7	6.2	15.5	4.4	19.0	9.7	14.5	3.4	5.0	9.5
Other industrialized countries	0.6	-5.3	-1.0	4.9	3.0	16.3	20.9	10.6	6.2	16.6	-0.9
Developing countries	-0.8	-13.6	-3.9	5.5	-3.1	-6.8	20.9	15.2	13.0	13.6	4.8
Latin America	6.4	-8.8	-0.5	10.9	-4.6	-16.3	11.3	14.1	10.2	7.6	-1.4
Africa	-14.7	-31.8	19.6	0.6	-1.9	-24.6	13.9	0.3	11.1	28.5	-5.7
West Asia	-5.3	-22.1	-23.1	-10.9	-8.0	-21.0	10.8	-0.9	26.4	21.6	-10.0
South and East Asia	5.4	-0.7	4.9	15.1	-2.4	8.8	29.7	23.5	11.8	10.2	13.0
Mediterranean	13.3	2.0	-2.8	11.2	6.4	-3.9	21.5	12.9	3.8	9.9	-6.3
China	17.5	1.9	1.4	12.0	10.1	14.0	26.9	20.2	9.1	18.1	15.8
Memo items:											
Net energy exporters	-5.8	-20.5	-11.0	-1.7	-7.6	-25.5	13.8	1.2	21.2	24.4	-3.7
Net energy importers	6.6	-3.8	5.1	13.2	0.1	8.0	24.7	22.7	9.5	7.2	8.5
Eastern Europe and the USSR	0.9	3.5	-1.1	-0.1	-2.6	5.2	4.1	-0.8	-1.5	-4.2	♦ -16.8
Eastern Europe	-1.9	0.8	-1.4	1.9	2.9	5.6	2.8	0.5	-3.2	-3.3	-10.6
USSR	3.8	6.3	-0.9	-1.9	-8.1	4.7	5.7	-2.2	0.4	-5.1	-21.8
Value of imports											
World	–	-6.4	-2.8	6.4	0.9	9.7	16.4	14.0	8.4	13.8	1.6
Developed market economies	-4.0	-6.3	-2.0	9.4	2.1	13.1	18.4	13.1	8.1	14.8	0.6
North America	7.5	-8.8	6.9	26.7	2.1	8.0	10.5	10.7	7.1	4.3	-1.0
European Community	-9.4	-4.8	-4.5	1.5	3.6	18.1	22.6	12.9	8.0	21.5	2.3
Japan	1.1	-8.0	-3.8	7.7	-4.2	-2.2	18.4	24.1	11.9	12.2	0.5
Other industrialized countries	-5.1	-5.7	-7.8	4.7	1.4	19.1	20.5	12.0	8.5	11.4	-4.5
Developing countries	12.0	-6.6	-4.8	0.5	-3.2	-0.1	14.1	20.2	9.9	12.9	8.2
Latin America	7.3	-19.7	-18.6	5.4	-0.1	1.6	9.6	10.8	6.4	9.7	14.0
Africa	13.5	-11.9	-6.1	-8.7	-12.5	–	-1.9	10.7	2.6	18.3	0.9
West Asia	19.5	3.3	-6.5	-10.3	-15.7	-10.8	1.3	9.5	1.4	8.2	-5.0
South and East Asia	10.7	-1.8	1.8	5.7	-4.8	4.2	28.8	29.7	15.2	16.0	12.1
Mediterranean	6.0	-8.9	-4.0	6.3	3.0	-2.2	18.0	4.4	11.9	32.9	-15.0
China	10.7	-12.6	12.9	21.6	63.9	1.5	0.5	27.4	5.7	-10.1	19.5
Memo items:											
Net energy exporters	19.9	-3.4	-11.6	-6.2	-14.6	-9.3	1.2	16.4	6.6	16.4	6.5
Net energy importers	6.1	-8.9	–	4.0	-1.8	5.3	23.2	20.9	11.8	14.6	7.7
Eastern Europe and the USSR	0.1	-6.8	-3.3	-1.1	3.8	6.9	-0.6	2.1	4.6	1.6	♦ -19.5
Eastern Europe	-5.2	-8.9	-3.6	0.4	6.2	13.0	0.8	-2.7	-2.1	3.2	6.1
USSR	6.8	-4.7	-3.0	-2.6	1.5	0.5	-2.2	7.9	12.0	–	-37.4

Table A.20 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Volume of exports											
World	1.9	-2.6	2.1	8.3	3.7	4.1	6.2	8.5	7.2	4.7	3.4
Developed market economies	5.2	-1.8	1.8	9.9	5.1	3.3	5.0	8.6	6.7	5.7	2.8
North America	14.3	-3.3	–	14.3	1.3	-8.3	11.5	17.9	8.3	7.8	5.4
European Community	-2.2	-0.3	0.7	6.0	7.1	9.3	4.0	6.2	6.8	5.8	1.7
Japan	24.0	-6.5	9.7	19.4	4.6	-0.5	0.3	4.7	3.8	5.5	2.8
Other industrialized countries	5.6	-0.8	2.4	7.9	5.8	6.9	5.5	6.1	5.3	6.7	2.0
Developing countries	-4.9	-6.9	2.1	5.6	1.1	12.0	10.9	10.2	8.5	5.9	10.1
Latin America	9.6	-0.7	3.0	11.7	0.4	-4.4	7.4	7.3	6.8	3.2	4.5
Africa	-21.0	-27.8	25.8	0.6	1.6	9.5	8.0	6.1	1.9	13.1	3.8
West Asia	-14.9	-18.2	-14.7	-9.4	-4.4	26.0	0.1	8.5	15.5	2.5	1.1
South and East Asia	6.2	8.1	8.0	12.2	1.8	19.8	18.4	14.1	10.5	7.4	14.2
Mediterranean	24.0	9.0	-2.5	13.8	9.1	-18.3	12.9	4.2	4.3	2.7	-5.3
China	15.6	13.7	5.4	11.6	14.4	19.5	24.0	15.7	6.7	13.0	9.5
Memo items:											
Net energy exporters	-13.3	-15.6	-3.8	-1.2	-1.8	9.7	4.8	-2.5	14.1	10.8	7.9
Net energy importers	11.5	5.8	6.7	10.2	4.4	9.4	15.5	10.7	8.2	5.8	9.8
Eastern Europe and the USSR	2.1	4.9	5.5	4.6	-1.0	4.3	2.4	4.3	-0.9	-10.7	♦ -21.6
Eastern Europe	2.7	5.3	8.0	7.0	2.5	-1.2	1.3	3.6	-1.9	-7.9	-16.2
USSR	1.9	4.5	3.3	2.5	-4.3	10.0	3.3	4.8	–	-13.1	-25.0
Volume of imports											
World	2.0	-1.4	1.3	8.3	3.3	4.9	5.8	9.4	7.8	4.4	3.1
Developed market economies	-2.0	-1.4	2.0	10.8	4.6	8.9	6.6	8.7	7.5	4.5	3.0
North America	10.2	-3.5	10.6	20.8	5.8	13.0	5.6	7.6	5.9	2.7	0.6
European Community	-7.5	-0.2	-0.5	6.8	4.2	7.5	7.6	8.3	7.9	7.3	4.8
Japan	-0.5	-2.2	1.3	10.8	0.4	10.7	8.5	15.5	7.5	5.5	3.1
Other industrialized countries	-1.5	-1.4	-4.5	6.5	6.3	6.2	7.8	7.5	8.5	4.7	0.5
Developing countries	14.8	-2.1	-1.1	2.8	-0.8	-5.4	4.8	14.1	9.7	5.9	8.6
Latin America	10.8	-15.7	-15.9	8.0	2.9	-4.4	4.1	4.8	5.9	5.1	13.6
Africa	17.2	-8.0	-2.5	-6.3	-10.5	-6.0	-11.9	5.3	1.8	7.0	2.6
West Asia	22.9	8.2	-3.0	-7.8	-13.9	-16.4	-8.3	4.7	1.3	-1.1	-4.1
South and East Asia	12.5	3.4	6.2	7.9	-2.4	-1.1	18.7	22.7	15.4	10.3	11.6
Mediterranean	6.8	-5.1	0.5	8.6	6.0	-2.5	4.4	1.2	9.6	17.2	-13.3
China	15.0	-8.2	15.5	23.7	69.0	-6.7	-6.4	21.2	5.5	-13.1	18.9
Memo items:											
Net energy exporters	24.4	1.1	-8.7	-3.9	-12.5	-16.0	-6.6	10.5	6.4	9.2	6.3
Net energy importers	7.3	-4.2	4.6	6.1	1.0	1.5	13.6	14.5	11.7	8.5	7.8
Eastern Europe and the USSR	0.4	1.7	4.0	4.1	5.3	-0.6	1.0	3.5	5.0	-5.2	♦ -30.0
Eastern Europe	-4.3	-5.3	4.0	4.0	5.7	4.8	3.4	3.3	1.2	-8.6	-14.7
USSR	6.4	9.7	3.9	4.4	4.7	-6.0	-1.6	4.0	9.2	-1.4	-39.9

Source: UN/DESD.

♦ Indicates break in the series.

a Preliminary estimates.

Table A.21. World trade: changes in prices of exports and imports and terms of trade, by major country group, 1981-1991
(Annual percentage change)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Unit value of exports											
World	-2.0	-4.8	-4.0	-2.3	-2.5	5.6	10.3	4.6	0.7	8.9	-1.4
Developed market economies	-4.9	-3.7	-2.9	-3.0	-1.8	12.9	11.4	5.1	0.2	9.1	-0.9
North America	-4.7	-4.5	-1.8	-2.6	-2.7	11.8	-0.5	5.7	1.8	-0.3	0.2
European Community	-4.8	-3.5	-3.3	-3.2	-1.6	12.4	15.8	4.4	-0.1	14.2	-2.0
Japan	-5.9	-2.3	-3.2	-3.3	-0.2	19.6	9.4	9.4	-0.4	-0.5	6.5
Other industrialized countries	-4.7	-4.5	-3.4	-2.8	-2.7	8.8	14.6	4.3	0.9	9.2	-2.9
Developing countries	4.2	-7.2	-5.9	-0.1	-4.1	-16.8	9.0	4.5	4.1	7.2	-4.8
Latin America	-2.9	-8.1	-3.4	-0.7	-4.9	-12.4	3.6	6.4	3.2	4.3	-5.7
Africa	8.1	-5.6	-4.9	–	-3.4	-31.1	5.4	-5.5	9.0	13.6	-9.1
West Asia	11.3	-4.7	-9.8	-1.6	-3.8	-37.3	10.6	-8.7	9.5	18.7	-11.0
South and East Asia	-0.7	-8.2	-2.9	2.6	-4.2	-9.2	9.6	8.3	1.2	2.6	-1.0
Mediterranean	-8.6	-6.4	-0.3	-2.3	-2.5	17.6	7.7	8.4	-0.4	7.0	-1.0
China	1.6	-10.4	-3.8	0.3	-3.8	-4.6	2.4	3.9	2.2	4.6	5.8
Memo items:											
Net energy exporters	8.6	-5.8	-7.5	-0.5	-5.9	-32.1	8.6	3.8	6.2	12.4	-10.8
Net energy importers	-4.4	-9.2	-1.5	2.7	-4.1	-1.3	7.9	10.8	1.2	1.4	-1.2
Eastern Europe and the USSR	-1.4	-1.3	-6.3	-4.5	-1.6	0.8	1.7	-4.9	-0.6	7.3	♦ 6.2
Eastern Europe	-4.5	-4.3	-8.6	-4.8	0.4	6.9	1.4	-3.0	-1.3	5.0	6.6
USSR	1.9	1.7	-4.1	-4.3	-4.0	-4.8	2.3	-6.7	0.4	9.2	4.3
Unit value of imports											
World	-2.0	-5.1	-4.0	-1.7	-2.3	4.5	10.0	4.2	0.5	9.0	-1.5
Developed market economies	-2.0	-4.9	-3.9	-1.3	-2.4	3.8	11.0	4.1	0.6	9.8	-2.4
North America	-2.5	-5.5	-3.3	4.9	-3.5	-4.4	4.7	2.9	1.1	1.6	-1.6
European Community	-2.1	-4.6	-4.0	-4.9	-0.5	9.9	13.9	4.3	0.1	13.2	-2.4
Japan	1.7	-5.8	-5.1	-2.8	-4.6	-11.7	9.1	7.4	4.1	6.4	-2.5
Other industrialized countries	-3.6	-4.3	-3.5	-1.7	-4.6	12.1	11.7	4.2	–	6.4	-5.0
Developing countries	-2.4	-4.7	-3.8	-2.3	-2.4	5.6	8.8	5.3	0.1	6.7	-0.3
Latin America	-3.2	-4.8	-3.2	-2.4	-2.9	6.2	5.2	5.7	0.5	4.4	0.3
Africa	-3.1	-4.2	-3.7	-2.6	-2.2	6.5	11.4	5.0	0.8	10.5	-1.6
West Asia	-2.8	-4.6	-3.7	-2.6	-2.1	6.7	10.5	4.6	0.1	9.4	-0.9
South and East Asia	-1.6	-5.0	-4.1	-2.1	-2.5	5.3	8.5	5.7	-0.2	5.2	0.5
Mediterranean	-0.7	-4.0	-4.5	-2.2	-2.8	0.3	13.1	3.2	2.1	13.4	-1.9
China	-3.8	-4.9	-2.3	-1.7	-3.0	8.8	7.3	5.1	0.2	3.5	0.5
Memo items:											
Net energy exporters	-3.7	-4.5	-3.2	-2.4	-2.3	8.0	8.3	5.4	0.2	6.6	0.2
Net energy importers	-1.1	-4.9	-4.4	-2.0	-2.8	3.8	8.5	5.6	0.1	5.6	–
Eastern Europe and the USSR	-0.3	-8.4	-7.0	-5.0	-1.4	7.5	-1.6	-1.4	-0.4	7.1	♦ 15.0
Eastern Europe	-0.9	-3.8	-7.3	-3.4	0.4	7.8	-2.5	-5.8	-3.3	12.9	24.4
USSR	0.4	-13.1	-6.7	-6.7	-3.1	6.9	-0.6	3.8	2.5	1.4	4.3

Table A.21 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Terms of trade											
World	–	0.3	–	-0.6	-0.1	1.1	0.3	0.4	0.2	-0.1	-0.2
Developed market economies	-3.0	1.3	1.0	-1.7	0.6	8.7	0.4	1.0	-0.4	-0.6	1.1
North America	-2.3	1.0	1.6	-7.2	0.8	16.9	-5.0	2.7	0.7	-1.8	1.3
European Community	-2.8	1.1	0.8	1.8	-1.1	2.3	1.7	0.1	-0.2	0.9	-0.1
Japan	-7.4	3.7	2.0	-0.5	4.6	35.4	0.3	1.9	-4.3	-6.5	9.2
Other industrialized countries	-1.2	-0.2	0.1	-1.1	2.0	-2.9	2.6	0.1	0.9	2.6	2.2
Developing countries	6.8	-2.7	-2.2	2.3	-1.7	-21.2	0.1	-0.8	4.0	0.5	-4.5
Latin America	0.3	-3.5	-0.2	1.7	-2.1	-17.6	-1.5	0.6	2.7	–	-6.0
Africa	11.5	-1.4	-1.2	2.7	-1.3	-35.3	-5.3	-10.0	8.2	2.8	-7.6
West Asia	14.5	-0.2	-6.4	1.0	-1.7	-41.2	0.1	-12.7	9.4	8.4	-10.2
South and East Asia	0.9	-3.3	1.2	4.7	-1.7	-13.8	1.0	2.5	1.4	-2.4	-1.5
Mediterranean	-7.9	-2.6	4.5	-0.1	0.3	17.3	-4.8	5.0	-2.5	-5.6	0.9
China	5.6	-5.8	-1.6	2.0	-0.8	-12.3	-4.6	-1.1	2.0	1.1	5.3
Memo items:											
Net energy exporters	12.8	-1.4	-4.5	1.9	-3.7	-37.1	0.2	-1.5	6.0	5.4	-10.9
Net energy importers	-3.3	-4.5	3.0	4.8	-1.3	-4.9	-0.5	4.9	1.1	-4.0	-1.2
Eastern Europe and the USSR	-1.1	7.8	0.8	0.5	-0.2	-6.2	3.4	-3.5	-0.2	0.2	♦ -7.7
Eastern Europe	-3.6	-0.5	-1.4	-1.4	–	-0.8	4.0	3.0	2.1	-7.0	-14.3
USSR	1.5	17.0	2.8	2.6	-0.9	-10.9	2.9	-10.1	-2.0	7.7	–

Source: UN/DESD.

♦ Indicates break in the series.

a Preliminary estimates.

Table A.22. Indices of prices of non-fuel primary commodities exported by developing countries, 1981-1991
(1985 = 100)

		Food	Tropical beverages	Vegetable oilseeds and oils	Agricultural raw materials	Minerals and metals	Combined index		Prices of manufactures[a]	Real prices of commodities[b]	Memo item: crude petroleum[c]
							Dollar	SDR			
1981		192	97	112	119	121	142	122	109	130	123
1982		131	92	90	103	105	111	102	107	104	121
1983		138	96	107	110	113	118	112	103	114	108
1984		116	110	144	111	105	114	112	100	114	102
1985		100	100	100	100	100	100	100	100	100	100
1986		110	124	62	102	95	104	90	120	87	55
1987		117	81	73	119	113	107	84	135	79	62
1988		152	82	96	129	164	135	102	144	94	49
1989		161	70	85	129	164	135	107	143	94	59
1990		151	62	74	137	149	127	95	158	80	75
1991		141	57	80	129	135	119	88	158	75	62
1990	I	165	58	74	132	140	129	99	145	89	64
	II	157	63	73	135	148	129	100	153	84	51
	III	144	62	73	140	160	128	95	160	80	82
	IV	137	63	77	142	148	123	87	169	73	103
1991	I	145	61	78	139	142	124	89	166	74	64
	II	142	57	76	128	136	119	90	152	78	58
	III	138	55	80	125	132	116	88	152	76	62
	IV	140	56	85	123	130	116	85	157	74	66

Sources: UNCTAD, *Monthly Commodity Price Bulletin*, and United Nations, *Monthly Bulletin of Statistics*.

[a] Unit value of exports of manufactures from developed market economies. The base of the original index has been shifted to 1985.

[b] Dollar index deflated by unit values of manufactured exports of developed market economies.

[c] OPEC oil price, which is the average spot price of a basket of seven OPEC country crudes (Saharan Blend, Minas, Bonny Light, Arab Light, Dubai, T. J. Light and Isthmus).

III. INTERNATIONAL FINANCE AND FINANCIAL MARKETS

Table A.23. World balance of payments on current account by country group, 1981-1991[a]
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Developed market economies	-3.6	-4.1	2.8	-29.2	-29.2	9.1	-14.4	-9.2	-32.7	-36.1	5.0
Major developed market economies of which:	22.2	18.8	10.1	-30.9	-30.4	10.2	-11.5	-4.6	-13.1	-18.1	20.2
Germany[c]	2.7	11.2	10.9	16.0	23.5	47.9	57.0	62.6	69.9	62.8	8.5
Japan	6.2	8.1	22.2	36.4	50.5	87.3	89.7	82.6	60.3	40.4	84.3
United States	14.1	2.5	-31.5	-88.2	-108.8	-131.4	-147.7	-113.1	-92.8	-71.7	-30.5
Other industrial countries	-25.8	-22.9	-7.3	1.7	1.1	-1.1	-3.0	-4.7	-19.6	-18.0	-15.2
Developing countries	-37.4	-75.5	-53.9	-21.4	-24.6	-45.8	-5.9	-18.0	-13.1	-2.0	-60.7
Capital-surplus countries	61.4	17.9	-2.4	6.8	11.5	-4.9	6.7	5.2	10.0	21.2	-3.6
Capital-importing countries	-98.8	-93.4	-51.5	-28.2	-36.1	-40.9	-12.6	-23.2	-23.1	-23.2	-57.1
Energy exporters	-29.2	-36.5	-13.5	-2.7	-4.6	-19.6	-2.7	-16.6	-7.5	5.8	-17.6
Energy importers	-71.6	-62.8	-42.4	-27.9	-20.1	-14.1	-10.2	-2.8	-11.2	-41.0	-53.4
Recent surplus economies	-7.2	-2.8	2.1	7.2	11.0	23.9	31.8	29.4	25.2	16.1	4.6
Other	-64.4	-60.0	-44.5	-35.1	-31.1	-38.0	-42.0	-32.2	-36.4	-57.1	-58.0
China	2.0	5.9	4.4	2.4	-11.5	-7.2	0.3	-3.8	-4.5	11.9	13.8
Eastern Europe and the Soviet Union[d]	-6.3	4.2	7.8	10.2	3.1	0.5	7.5	3.2	-6.1	♦ -10.9	-5.5
Eastern Europe	-4.7	0.6	2.0	3.5	3.0	0.1	0.4	0.9	-2.1	♦ -5.8	-3.7
Soviet Union	-1.6	3.6	5.8	6.7	0.1	0.4	7.1	2.3	-4.0	♦ -5.1	-1.8
World residual[e] of which:	47.3	75.5	43.3	40.4	50.8	36.2	12.8	24.1	51.9	49.0	61.2
Trade residual (imports, f.o.b.)	-31.5	-12.1	-19.8	-29.1	-16.2	-10.7	-35.5	-37.7	-17.7	-25.2	-20.1
Services and private transfers	78.8	87.5	63.0	69.5	66.9	46.9	48.3	61.7	69.6	74.2	81.4

Source: UN/DESD, based on data of IMF and other national and international sources.

♦ Indicates break in series, based on the latest official data.

a Balance on goods, services and private transfers.
b Preliminary estimate.
c Including transactions of the former German Democratic Republic as from July 1990.
d Balance in convertible currencies; total includes the former German Democratic Republic until 1990.
e Unreported trade, services and private transfers, as well as errors and timing asymmetries in reported data.

Table A.24. Current account transactions: developed market economies, 1981-1991[a]
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Major developed market economies											
Merchandise exports	905.2	846.2	836.6	897.7	926.2	1 071.7	1 239.3	1 435.5	1 540.9	1 749.4	1 798.1
Merchandise imports (f.o.b.)	-905.7	-846.4	-849.5	-945.5	-966.5	-1 071.9	-1 251.0	-1 426.5	-1 548.7	-1 757.9	-1 774.3
Trade balance	-0.5	-0.2	-12.9	-47.7	-40.2	-0.3	-11.7	9.0	-7.7	-8.5	23.9
Net services and private transfers	22.7	19.0	23.0	16.9	9.9	10.5	0.3	-13.5	-5.4	-9.6	-3.7
of which: investment income	23.7	18.2	22.5	21.3	14.0	13.7	15.4	17.9	18.7	22.9	18.4
Current account balance	22.2	18.8	10.1	-30.9	-30.4	10.2	-11.5	-4.6	-13.1	-18.1	20.2
of which:											
Germany[c]											
Merchandise exports	166.8	165.8	159.9	161.4	173.7	231.0	278.5	308.6	324.9	391.6	378.3
Merchandise imports (f.o.b.)	-150.7	-141.1	-138.5	-139.2	-145.1	-175.3	-208.3	-228.8	-247.2	-320.0	-356.8
Trade balance	16.1	24.7	21.4	22.1	28.6	55.8	70.2	79.8	77.8	71.6	21.5
Net services and private transfers	-13.4	-13.5	-10.5	-6.2	-5.1	-7.9	-13.2	-17.3	-7.9	-8.8	-13.0
of which: investment income	0.6	-1.2	1.6	3.6	3.3	4.2	4.0	5.1	11.6	17.2	17.3
Current account balance	2.7	11.2	10.9	16.0	23.5	47.9	57.0	62.6	69.9	62.8	8.5
Japan											
Merchandise exports	149.5	137.7	145.5	168.3	174.0	205.6	224.6	259.8	269.6	280.4	306.6
Merchandise imports (f.o.b.)	-129.6	-119.6	-114.0	-124.0	-118.0	-112.8	-128.2	-164.8	-192.7	-216.8	-203.3
Trade balance	20.0	18.1	31.5	44.3	56.0	92.8	96.4	95.0	76.9	63.6	103.3
Net services and private transfers	-13.8	-9.9	-9.3	-7.9	-5.5	-5.5	-6.7	-12.4	-16.6	-23.2	-19.0
of which: investment income	-0.8	1.7	3.1	4.2	6.8	9.5	16.7	21.0	23.4	23.2	26.6
Current account balance	6.2	8.1	22.2	36.4	50.5	87.3	89.7	82.6	60.3	40.4	84.3

Table A.24 (continued)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
United States											
Merchandise exports	237.1	211.2	201.8	219.9	215.9	223.4	250.3	320.3	361.5	389.5	416.5
Merchandise imports (f.o.b.)	-265.1	-247.6	-268.9	-332.4	-338.1	-368.4	-409.8	-447.3	-477.4	-497.7	-490.1
Trade balance	-28.0	-36.4	-67.1	-112.5	-122.2	-145.1	-159.5	-127.0	-115.9	-108.1	-73.6
Net services and private transfers	42.1	38.9	35.6	24.4	13.3	13.7	11.8	13.9	23.2	36.4	43.0
of which: investment income	31.4	28.3	27.4	23.4	16.1	11.0	7.6	5.3	2.7	11.9	9.4
Current account balance	14.1	2.5	-31.5	-88.2	-108.8	-131.4	-147.7	-113.1	-92.8	-71.7	-30.5
Other industrial countries											
Merchandise exports	329.9	312.4	308.8	323.3	332.8	393.7	474.0	537.8	569.7	674.8	679.3
Merchandise imports (f.o.b.)	-360.3	-338.4	-318.8	-323.6	-332.2	-398.2	-486.0	-550.8	-591.5	-696.8	-694.3
Trade balance	-30.4	-26.0	-10.0	-0.3	0.6	-4.6	-12.0	-13.0	-21.9	-22.0	-15.0
Net services and private transfers	4.6	3.1	2.7	2.0	0.5	3.5	9.0	8.3	2.3	4.0	-0.2
of which: investment income	-12.5	-13.0	-12.9	-13.4	-15.0	-16.2	-16.0	-18.6	-21.9	-27.8	-32.0
Current account balance	-25.8	-22.9	-7.3	1.7	1.1	-1.1	-3.0	-4.7	-19.6	-18.0	-15.2
All developed market economies											
Merchandise exports	1 235.1	1 158.6	1 145.4	1 221.0	1 259.0	1 465.3	1 713.3	1 973.3	2 110.6	2 424.2	2 477.5
Merchandise imports (f.o.b.)	-1 266.0	-1 184.8	-1 168.3	-1 269.0	-1 298.6	-1 470.2	-1 737.0	-1 977.4	-2 140.2	-2 454.6	-2 468.6
Trade balance	-30.9	-26.2	-22.9	-48.1	-39.6	-4.8	-23.7	-4.1	-29.6	-30.4	8.9
Net services and private transfers	27.3	22.1	25.7	18.9	10.4	13.9	9.3	-5.2	-3.1	-5.7	-3.9
of which: investment income	11.2	5.2	9.6	7.9	-1.0	-2.5	-0.6	-0.7	-3.2	-4.9	-13.7
Current account balance	-3.6	-4.1	2.8	-29.2	-29.2	9.1	-14.4	-9.2	-32.7	-36.1	5.0

Source: UN/DESD, based on data of IMF and national sources.

a Balance on goods, services and private transfers.
b Preliminary (based in part on Secretariat estimates).
c Including transactions of the former German Democratic Republic as from July 1990.

Table A.25. Current account transactions: Eastern Europe and the Soviet Union, 1981-1991[a]
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Eastern Europe[c]											
Merchandise exports	31.8	31.0	31.5	33.5	33.4	30.6	33.7	36.6	38.1	39.1	♦ 37.3
Merchandise imports (f.o.b.)	-31.3	-26.0	-26.2	-26.8	-27.7	-28.0	-31.5	-33.7	-36.4	-42.8	♦-38.3
Trade balance	0.5	5.0	5.3	6.7	5.7	2.6	2.2	2.9	1.7	-3.7	♦ -1.1
Net services and private transfers	-5.2	-4.4	-3.3	-3.2	-2.7	-2.5	-1.8	-2.0	-3.8	-2.1	♦ -2.6
Current account balance	-4.7	0.6	2.0	3.5	3.0	0.1	0.4	0.9	-2.1	-5.8	♦ -3.7
Soviet Union											
Merchandise exports	39.1	43.4	44.2	43.3	36.9	34.6	40.8	42.7	45.1	♦ 33.5	31.8
Merchandise imports (f.o.b.)	-39.9	-39.1	-38.0	-36.6	-36.2	-33.3	-32.7	-39.2	-47.4	♦-35.1	-30.7
Trade balance	-0.8	4.3	6.2	6.7	0.7	1.3	8.1	3.5	-2.3	♦ -1.6	1.1
Net services and private transfers	-0.8	-0.7	-0.4	0.0	-0.6	-0.9	-1.0	-1.2	-1.7	♦ -3.5	-2.9
Current account balance	-1.6	3.6	5.8	6.7	0.1	0.4	7.1	2.3	-4.0	♦ -5.1	-1.8
Eastern Europe and the Soviet Union[c]											
Merchandise exports	70.9	74.4	75.7	76.8	70.3	65.2	74.5	79.3	72.6	♦ 72.6	69.1
Merchandise imports (f.o.b.)	-71.2	-65.1	-64.2	-63.4	-63.9	-61.3	-64.2	-72.9	-83.8	♦-77.9	-69.0
Trade balance	-0.3	9.3	11.5	13.4	6.4	3.9	10.3	6.4	-0.6	♦ -5.3	–
Net services and private transfers	-6.0	-5.1	-3.7	-3.2	-3.3	-3.4	-2.8	-3.2	-5.5	♦ -5.6	-5.5
Current account balance	-6.3	4.2	7.8	10.2	3.1	0.5	7.5	3.2	-6.1	♦-10.9	-5.5

Source: UN/DESD, based on data of IMF and ECE.

♦ Indicates break in series based on the latest official data.

a Balance in convertible currencies on goods, services and private transfers.
b Preliminary (based in part on Secretariat estimates).
c Including transactions of the former German Democratic Republic until 1990.

Table A.26. Current account transactions: developing countries, 1981-1991[a]
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Surplus energy exporters (8 economies)											
Merchandise exports	197.5	155.9	121.1	112.5	94.8	61.6	76.2	76.8	94.3	112.1	98.6
Merchandise imports (f.o.b.)	-91.5	-95.3	-86.4	-76.8	-61.9	-54.3	-55.5	-61.1	-67.0	-67.1	-66.9
Trade balance	106.0	60.6	34.7	35.7	33.0	7.3	20.7	15.7	27.4	45.0	31.6
Net services and private transfers	-44.5	-42.7	-37.2	-28.9	-21.5	-12.2	-14.0	-10.5	-17.4	-23.8	-35.2
of which: investment income	15.2	18.4	19.7	15.4	15.9	18.7	15.8	17.1	17.9	16.3	15.5
Current account balance	61.4	17.9	-2.4	6.8	11.5	-4.9	6.7	5.2	10.0	21.2	-3.6
Deficit energy exporters (19 economies)											
Merchandise exports	140.1	125.7	121.3	133.5	127.1	91.6	111.2	113.6	134.3	169.7	171.3
Merchandise imports (f.o.b.)	-129.3	-117.9	-99.6	-98.9	-94.0	-80.9	-85.4	-102.5	-111.9	-134.0	-163.0
Trade balance	10.8	7.8	21.7	34.6	33.0	10.7	25.8	11.2	22.3	35.7	8.4
Net services and private transfers	-40.0	-44.3	-35.2	-37.3	-37.6	-30.4	-28.6	-27.8	-29.8	-29.9	-26.0
of which: investment income	-19.3	-25.1	-23.7	-26.2	-25.6	-22.2	-24.8	-25.7	-28.2	-28.0	-26.0
Current account balance	-29.2	-36.5	-13.5	-2.7	-4.6	-19.6	-2.7	-16.6	-7.5	5.8	-17.6
Energy-importing countries (100 economies)											
Merchandise exports	214.7	204.4	211.6	239.6	236.6	258.7	321.8	396.1	433.5	466.4	512.6
Merchandise imports (f.o.b.)	-270.5	-248.1	-238.9	-246.1	-240.1	-255.9	-317.8	-382.4	-429.6	-495.4	-550.4
Trade balance	-55.8	-43.7	-27.3	-6.6	-3.5	2.8	4.0	13.7	3.8	-29.0	-37.8
Net services and private transfers	-15.8	-19.1	-15.1	-21.3	-16.6	-16.8	-14.2	-16.5	-15.0	-12.0	-15.6
of which: investment income	-30.3	-37.3	-35.4	-38.0	-37.1	-36.0	-36.5	-39.2	-38.0	-32.9	-33.6
Current account balance	-71.6	-62.8	-42.4	-27.9	-20.1	-14.1	-10.2	-2.8	-11.2	-41.0	-53.4

Table A.26 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991^b
Recent surplus economies (4 economies)											
Merchandise exports	84.6	83.1	90.7	107.6	108.6	130.2	175.5	221.1	243.7	262.8	302.8
Merchandise imports (f.o.b.)	-93.7	-90.5	-93.2	-101.0	-99.8	-111.1	-150.0	-198.9	-224.3	-255.3	-304.4
Trade balance	-9.0	-7.4	-2.5	6.5	8.8	19.1	25.5	22.2	19.3	7.5	-1.6
Net services and private transfers	1.9	4.6	4.6	0.6	2.2	4.8	6.3	7.2	5.9	8.6	6.2
of which: investment income	-3.8	-3.6	-2.9	-2.2	-1.4	-0.7	-0.1	1.6	2.7	4.7	4.1
Current account balance	-7.2	-2.8	2.1	7.2	11.0	23.9	31.8	29.4	25.2	16.1	4.6
Other energy importers (96 economies)											
Merchandise exports	130.1	121.3	121.0	132.0	128.0	128.4	146.3	175.0	189.8	203.6	213.6
Merchandise imports (f.o.b.)	-176.8	-157.6	-145.7	-145.1	-140.3	-144.8	-167.8	-183.5	-205.3	-240.1	-259.0
Trade balance	-46.7	-36.3	-24.8	-13.1	-12.3	-16.4	-21.5	-8.5	-15.5	-36.5	-36.2
Net services and private transfers	-17.7	-23.7	-19.7	-22.0	-18.8	-21.6	-20.5	-23.7	-20.9	-20.6	-21.3
of which: investment income	-26.5	-33.7	-32.6	-35.7	-35.7	-35.3	-36.4	-40.8	-40.7	-37.6	-37.7
Current account balance	64.4	-60.0	-44.5	-35.1	-31.1	-38.0	-42.0	-32.2	-36.4	-57.1	-58.0
China											
Merchandise exports	22.0	21.1	20.7	23.9	25.1	25.8	34.7	41.1	43.2	51.5	59.7
Merchandise imports (f.o.b.)	-20.3	-16.9	-18.7	-23.9	-38.2	-34.9	-36.4	-46.4	-48.8	-42.4	-50.6
Trade balance	1.7	4.2	2.0	0.0	-13.1	-9.1	-1.7	-5.3	-5.6	9.2	9.0
Net services and private transfers	0.3	1.6	2.4	2.4	1.6	2.0	2.0	1.5	1.2	2.8	4.8
of which: investment income	-0.2	0.4	1.2	1.5	0.8	0.0	-0.2	-0.2	0.2	1.1	1.3
Current account balance	2.0	5.9	4.4	2.4	-11.5	-7.2	0.3	-3.8	-4.5	11.9	13.8

Table A.26 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
Long-term capital-importing countries (120 economies)											
Merchandise exports	376.8	351.2	353.6	397.0	388.8	376.0	467.7	550.8	611.0	687.6	743.6
Merchandise imports (f.o.b.)	-420.1	-382.9	-357.2	-369.0	-372.4	-371.7	-439.5	-531.2	-590.4	-671.7	-763.9
Trade balance	-43.3	-31.6	-3.6	28.1	16.4	4.4	28.2	19.6	20.6	15.9	-20.4
Net services and private transfers	-55.6	-61.8	-47.9	-56.3	-52.6	-45.2	-40.8	-42.8	-43.7	-39.1	-36.8
of which: investment income	-49.8	-62.0	-58.0	-62.7	-61.9	-58.2	-61.6	-65.0	-66.0	-59.8	-58.3
Current account balance	-98.8	-93.4	-51.5	-28.2	-36.1	-40.9	-12.6	-23.2	-23.1	-23.2	-57.1
All developing countries (128 economies)											
Merchandise exports	574.3	507.2	474.8	509.5	483.6	437.6	543.9	627.7	705.3	799.7	842.2
Merchandise imports (f.o.b.)	-511.6	-478.2	-443.6	-445.7	-434.2	-426.0	-495.0	-592.3	-657.4	-738.8	-830.9
Trade balance	62.7	29.0	31.1	63.8	49.4	11.7	48.9	35.3	47.9	61.0	11.3
Net services and private transfers	-100.1	-104.5	-85.0	-85.2	-74.0	-57.4	-54.8	-53.3	-61.0	-63.0	-72.0
of which: investment income	-34.6	-43.6	-38.3	-47.3	-46.0	-39.5	-45.8	-47.9	-48.1	-43.5	-42.8
Current account balance	-37.4	-75.5	-53.9	-21.4	-24.6	-45.8	-5.9	-18.0	-13.1	-2.0	-60.7

Source: UN/DESD, based on data of IMF, official national and other sources.

a Balance on goods, services and private transfers.
b Preliminary estimate.

Table A.27. Net transfer of financial resources of industrial countries, 1981-1991
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
United States											
Net capital flow	1.1	8.7	45.2	104.4	126.8	142.2	158.0	126.7	143.2	109.2	76.9
Private grants[b]	-0.6	-0.9	-0.9	-1.2	-1.4	-1.2	-1.2	-0.8	-1.0	-1.0	-1.3
Official grants	-5.8	-8.3	-8.7	-10.8	-13.4	-14.0	-12.5	-13.3	-13.6	-20.5	21.9
Direct investment[c]	26.2	19.9	18.6	28.3	21.3	27.7	47.7	52.1	63.4	40.0	31.2
Portfolio	15.5	9.5	1.7	25.0	68.6	81.5	61.7	66.0	73.3	-4.9	12.6
Medium- and long-term loans	-19.0	-22.7	-18.0	-12.8	8.0	-5.1	-0.6	11.6	3.4	24.0	25.1
Short-term capital	-34.9	-25.5	41.0	48.8	23.8	37.5	69.7	20.3	-0.6	8.0	-9.5
Errors and omissions	19.6	36.7	11.4	27.2	19.9	15.9	-6.7	-9.1	18.4	63.7	-3.1
Use of IMF credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	20.8	21.2	14.0	9.1	0.7	-1.4	-13.0	-5.2	-23.5	-24.3	-29.2
Net transfer of resources (financial basis)	21.8	29.9	59.3	113.5	127.4	140.8	145.0	121.5	119.7	84.8	47.7
Use of official reserves[d]	-5.2	-5.0	-1.2	-3.1	-3.8	0.3	9.1	-3.9	-25.3	-2.2	-9.3
Net transfer of resources (expenditure basis)	**16.7**	**24.9**	**58.1**	**110.3**	**123.6**	**141.1**	**154.2**	**117.6**	**94.5**	**82.6**	**38.5**
United Kingdom											
Net capital flow	-20.9	-12.5	-7.5	-2.9	-5.9	2.9	28.3	36.9	26.0	25.2	20.1
Private grants[b]	0.1	0.1	0.5	0.5	0.4	0.1	-0.2	-0.5	-0.5	-0.5	-0.5
Official grants	-2.8	-3.1	-2.9	-2.9	-4.4	-3.3	-5.3	-5.9	-7.0	-8.3	-1.8
Direct investment[c]	-5.3	-0.8	-1.5	-5.2	-4.3	-5.5	-10.6	-8.3	1.5	24.0	13.5
Portfolio	-8.7	-13.3	-8.3	-11.5	-8.6	-15.2	44.2	10.0	-29.5	-14.3	-16.6
Medium- and long-term loans	-3.9	-1.7	-3.9	-2.4	2.1	6.6	2.0	4.3	7.8	11.4	12.6
Short-term capital	-1.7	10.3	7.6	10.6	8.3	9.8	1.1	26.9	41.9	11.8	21.7
Errors and omissions	1.8	-3.7	1.1	8.1	0.4	10.4	-2.8	10.3	11.7	1.1	-8.9
Use of IMF credit	-0.3	-0.3	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	1.6	1.6	2.9	2.7	1.7	2.7	-0.1	-1.8	-2.1	-1.4	-6.7
Net transfer of resources (financial basis)	-19.3	-10.9	-4.7	-0.2	-4.2	5.5	28.2	35.1	23.9	23.8	13.4
Use of official reserves[d]	4.7	2.4	0.9	1.3	-0.6	-1.4	-20.2	-4.9	8.8	-0.1	-5.0
Net transfer of resources (expenditure basis)	**-14.7**	**-8.5**	**-3.8**	**1.1**	**-4.8**	**4.1**	**8.0**	**30.3**	**32.7**	**23.7**	**8.4**
Germany											
Net capital flow	-5.3	-9.6	-13.8	-15.9	-20.9	-41.7	-36.8	-79.0	-67.9	-53.3	-7.2
Private grants[b]	-1.2	-1.1	-1.1	-0.8	-0.9	-1.3	-1.4	-2.0	-1.6	-2.2	-1.3
Official grants	-6.0	-6.3	-5.7	-6.5	-6.6	-8.1	-11.1	-12.3	-13.0	-16.0	-28.9
Direct investment[c]	-2.7	-1.8	-1.4	-2.5	-3.3	-7.0	-7.1	-9.2	-6.8	-16.7	-16.1
Portfolio	8.2	-0.5	3.5	1.3	1.8	23.6	-1.9	-43.6	-5.0	-2.3	22.6
Medium- and long-term loans	-1.1	-3.9	-5.1	-4.3	-1.9	0.1	-3.6	4.2	-0.1	-17.4	-20.6
Short-term capital	-2.5	6.3	-4.6	-5.3	-13.3	-50.7	-11.1	-18.9	-47.4	-16.3	27.3
Errors and omissions	0.1	-2.4	0.6	2.3	3.2	1.7	-0.6	2.8	5.9	17.6	9.7
Use of IMF credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	-0.3	-1.0	1.5	2.3	2.1	2.2	3.8	4.2	10.9	12.8	14.9
Net transfer of resources (financial basis)	-5.6	-10.7	-12.4	-13.6	-18.8	-39.5	-33.0	-74.8	-57.0	-40.5	7.7
Use of official reserves[d]	2.2	-2.9	1.9	0.3	-2.2	-5.4	-21.5	15.4	-2.8	-7.3	1.3
Net transfer of resources (expenditure basis)	**-3.4**	**-13.5**	**-10.4**	**-13.2**	**-21.0**	**-44.9**	**-54.5**	**-59.4**	**-59.8**	**-47.8**	**8.9**

Table A.27 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Japan											
Net capital flow	-2.5	-12.9	-20.8	-34.4	-51.4	-73.1	-52.8	-67.2	-74.0	-48.0	-90.6
Private grants[b]	-0.2	-0.1	-0.2	-0.1	-0.3	-0.6	-1.0	-1.1	-1.0	-1.0	-0.7
Official grants	-1.2	-1.3	-1.4	-1.4	-1.4	-1.5	-2.7	-3.0	-3.3	-4.5	-11.8
Direct investment[c]	-4.7	-4.1	-3.2	-6.0	-5.8	-14.3	-18.4	-34.7	-45.2	-46.3	-29.8
Portfolio	7.7	0.8	-2.9	-24.0	-41.8	-102.0	-91.3	-52.8	-32.5	-14.5	37.4
Medium- and long-term loans	-9.4	-13.0	-12.6	-20.1	-15.7	-15.8	-24.3	-29.6	-16.0	7.7	25.4
Short-term capital	4.9	0.1	-2.6	13.4	9.7	58.6	88.6	50.9	45.8	31.5	-104.6
Errors and omissions	0.4	4.7	2.1	3.7	3.8	2.5	-3.7	3.1	-21.8	-20.9	-6.5
Use of IMF credit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net dividends and interest	-0.8	1.7	3.1	4.2	6.8	9.5	16.7	21.0	23.4	23.2	26.7
Net transfer of resources (financial basis)	-3.3	-11.2	-17.7	-30.2	-44.6	-63.6	-36.1	-46.2	-50.6	-24.8	-63.9
Use of official reserves[d]	-3.9	4.7	-1.6	-2.1	0.6	-14.8	-37.9	-16.5	12.8	6.6	5.4
Net transfer of resources (expenditure basis)	**-7.2**	**-6.5**	**-19.3**	**-32.3**	**-44.0**	**-78.4**	**-74.0**	**-62.7**	**-37.8**	**-18.2**	**-58.5**
Other industrial countries											
Net capital flow	34.4	35.0	23.4	15.9	2.5	0.8	52.4	53.0	68.3	103.2	..
Private grants[b]	-0.6	-0.2	-0.5	0.2	0.1	-0.7	-0.4	0.3	-0.6	-2.8	..
Official grants	-3.4	-5.2	-3.6	-3.4	-2.9	-7.0	-6.7	-7.4	-9.7	-13.3	..
Direct investment[c]	-9.1	-0.2	-1.4	-4.1	-10.5	-9.4	-11.6	-8.6	-13.6	-15.0	..
Portfolio	3.9	4.9	4.1	10.9	16.5	14.4	21.3	29.8	57.0	48.8	..
Medium- and long-term loans	20.7	21.8	18.7	13.5	5.7	3.4	24.3	14.5	22.6	28.6	..
Short-term capital	29.8	3.2	8.9	2.7	5.0	9.7	26.7	34.5	29.7	81.4	..
Errors and omissions	-6.6	10.2	-3.2	-4.1	-11.4	-9.2	-0.4	-9.4	-17.2	-24.6	..
Use of IMF credit	-0.4	0.6	0.3	0.2	0.0	-0.4	-0.8	-0.5	0.0	0.0	..
Net dividends and interest	-22.6	-26.6	-28.0	-30.5	-29.8	-34.5	-38.2	-46.7	-52.6	-66.5	..
Net transfer of resources (financial basis)	11.8	8.5	-4.7	-14.6	-27.3	-33.7	14.2	6.3	15.8	36.8	..
Use of official reserves[d]	9.0	2.3	-15.2	-15.7	-0.2	-3.5	-38.2	-27.6	-20.4	-53.4	..
Net transfer of resources (expenditure basis)	**20.8**	**10.7**	**-19.9**	**-30.3**	**-27.5**	**-37.2**	**-24.0**	**-21.3**	**-4.6**	**-16.6**	**..**

Source: UN/DESD, based on data of IMF and the World Bank, and United Nations Secretariat estimates.

a Preliminary estimate.
b Excluding workers' remittances.
c Net of reinvested earnings.
d Additions to reserves are shown as negative numbers.
e Including transactions of the former German Democratic Republic as from July 1990.

Table A.28. Net transfer of financial resources of capital-importing developing countries, 1981-1991
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
						All countries[a]					
Transfer through direct investment											
Net investment flow	9.7	7.2	6.3	6.3	7.5	5.9	9.4	14.6	16.8	17.0	18.9
Net dividends and other income	-10.2	-9.8	-9.4	-8.6	-8.0	-7.1	-8.1	-8.5	-10.0	-10.8	-10.4
Net transfer	-0.4	-2.6	-3.1	-2.3	-0.5	-1.2	1.2	6.1	6.7	6.2	8.4
Transfer through medium- and long-term foreign private borrowing											
Net credit flow	48.2	41.4	27.4	18.9	12.7	8.0	2.2	8.4	4.5	7.4	10.2
Interest paid	-31.2	-37.3	-35.5	-40.4	-39.4	-34.9	-34.0	-39.7	-32.7	-29.6	-34.1
Net transfer	17.0	4.1	-8.1	-21.5	-26.6	-26.9	-31.7	-31.3	-28.2	-22.2	-23.9
Transfer through short-term borrowing and domestic outflows[c]											
Net transfer	-13.7	-29.1	-22.1	-13.8	-13.1	-3.4	-7.1	-15.2	-8.8	-7.3	13.6
Transfer through private grants (net)	1.8	1.7	2.1	2.6	2.9	3.8	4.1	4.9	3.5	3.8	4.0
Transfer through official flows											
Official transfers (grants)	12.0	9.3	10.2	10.9	11.6	11.2	12.6	13.1	13.9	28.6	31.7
Net official credits	29.8	32.6	30.0	24.8	19.1	19.0	17.2	16.8	20.7	21.0	22.3
Interest paid	-6.8	-8.2	-9.6	-11.1	-12.7	-15.6	-16.8	-18.3	-18.6	-20.4	-23.7
Net transfer	35.0	33.7	30.7	24.5	17.9	14.6	13.1	11.6	16.0	29.2	30.3
Total net transfer (financial basis)	39.7	7.8	-0.5	-10.6	-19.4	-13.0	-20.4	-23.9	-10.7	9.6	32.5
Use of official reserves[d]	3.0	19.2	-6.4	-18.7	2.2	8.7	-13.1	-8.2	-18.3	-35.6	-45.6
Total net transfer (expenditure basis)	42.7	26.9	-7.0	-29.3	-17.2	-4.3	-33.5	-32.1	-29.0	-26.0	-13.0
						Africa					
Grants											
Private	0.2	0.2	0.3	0.5	0.9	1.1	0.9	1.0	1.0	0.9	1.0
Official	3.4	2.9	3.9	4.2	4.8	5.1	6.1	6.2	7.3	20.2	11.5
Net direct investment	-0.5	-0.8	-0.2	-0.2	0.6	0.2	-0.1	0.2	2.5	0.4	0.3
Foreign official credit	7.4	7.4	6.3	4.2	2.1	1.6	3.1	2.1	2.5	0.2	1.5
Foreign private credit [e]	1.2	2.6	-0.4	-2.2	-3.1	-0.9	-0.6	-0.8	-4.0	-4.4	-4.1
Short-term borrowing and domestic outflows [c]	-0.4	-0.8	-1.7	-3.5	-3.6	-1.3	-7.0	-4.8	-4.9	-16.1	-9.3
Total net transfer (financial basis)	11.3	11.6	8.1	2.9	1.7	5.7	2.4	4.0	4.4	1.1	0.9
Use of official reserves[d]	4.2	3.0	0.3	-0.3	-2.3	1.0	-1.5	0.0	-0.5	-5.8	-2.1
Total net transfer (expenditure basis)	15.5	14.7	8.4	2.6	-0.6	6.8	1.0	4.0	3.8	-4.7	-1.2
						Sub-Saharan Africa					
Grants											
Private	0.1	0.2	0.2	0.5	0.7	0.6	0.7	0.9	0.7	0.8	0.8
Official	3.2	2.8	2.9	3.0	3.5	3.9	4.9	5.1	5.8	5.7	5.9
Net direct investment	-0.4	-0.3	-0.3	-0.6	-0.5	-0.7	-0.6	-0.5	-0.6	-0.9	-0.4
Foreign official credit	4.8	4.2	4.0	2.2	1.5	1.7	2.7	2.2	2.2	2.6	2.9
Foreign private credit [e]	0.6	1.2	-0.1	-0.2	-0.6	-0.4	-0.5	0.1	-0.2	-0.2	-0.2
Short-term borrowing and domestic outflows [c]	0.8	-0.5	-0.9	-2.4	-0.5	0.7	-0.2	-0.4	-1.4	-1.4	-1.6
Total net transfer (financial basis)	9.2	7.5	5.8	2.6	4.0	5.8	7.0	7.4	6.4	6.5	7.4
Use of official reserves[d]	-0.1	-0.1	-0.4	-0.3	-0.8	-0.5	-0.7	-0.6	0.1	0.5	-0.5
Total net transfer (expenditure basis)	9.1	7.4	5.4	2.3	3.1	5.3	6.3	6.7	6.5	7.0	6.9

Table A.28 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[b]
						Asia					
Grants											
Private	0.6	0.8	1.0	1.0	0.9	1.5	1.8	2.0	0.6	0.8	2.0
Official	7.4	5.6	5.2	5.3	4.6	4.6	4.3	4.6	4.2	4.3	4.2
Net direct investment	-2.4	-2.5	-2.6	-1.8	-1.4	0.1	0.3	3.1	3.5	4.3	3.4
Foreign official credit	11.1	9.3	10.4	3.5	3.3	1.4	1.1	0.8	4.9	2.7	6.6
Foreign private credit [e]	3.6	4.4	5.2	2.0	2.0	-2.3	-12.5	-8.7	-6.4	-4.8	-5.2
Short-term borrowing and domestic outflows [c]	-5.2	-3.8	-2.9	0.5	2.3	-0.4	1.4	3.9	5.6	10.1	14.2
Total net transfer (financial basis)	15.2	13.8	16.3	10.6	11.6	4.8	-3.4	5.7	12.5	17.5	25.2
Use of official reserves[d]	-1.4	-3.9	-5.6	-5.8	4.8	0.7	-8.3	-12.3	-10.0	-12.5	-10.6
Total net transfer (expenditure basis)	13.7	9.9	10.7	4.7	16.4	5.6	-11.7	-6.6	2.5	4.9	14.6
						Latin America					
Grants											
Private	0.6	0.4	0.5	0.7	0.9	1.0	1.1	1.5	1.5	1.6	1.6
Official	1.1	0.7	0.9	1.2	2.1	1.4	1.9	1.9	2.0	3.0	3.4
Net direct investment	2.3	0.6	-0.4	-0.5	0.1	-1.8	0.7	2.0	-0.5	0.2	3.7
Foreign official credit	3.6	7.2	4.7	6.2	2.1	1.5	-1.5	-1.7	-1.8	–	-5.8
Foreign private credit [e]	13.2	-0.8	-11.8	-19.0	-23.5	-22.4	-18.8	-24.2	-18.0	-11.4	-14.9
Short-term borrowing and domestic outflows [c]	-8.0	-24.2	-18.8	-11.5	-11.8	-1.7	0.8	-8.2	-9.9	-9.0	16.4
Total net transfer (financial basis)	12.8	-16.1	-24.8	-22.9	-30.2	-22.0	-15.9	-28.6	-26.7	-15.6	4.4
Use of official reserves[d]	1.5	19.7	-0.7	-12.2	-0.6	7.9	-3.4	6.6	-2.8	-14.1	-17.6
Total net transfer (expenditure basis)	14.3	3.7	-25.5	-35.2	-30.8	-14.1	-19.3	-22.0	-29.5	-29.7	-13.2
						Fifteen heavily indebted countries					
Grants											
Private	0.8	0.6	0.7	0.9	1.0	1.1	1.3	1.4	1.6	1.9	2.1
Official	1.1	0.7	0.7	0.8	1.3	0.9	1.2	1.3	1.5	2.7	2.5
Net direct investment	1.9	0.2	-0.5	-0.5	0.3	-1.7	0.6	2.5	1.6	1.1	4.8
Foreign official credit	4.5	7.3	5.5	5.5	0.2	0.0	-2.7	-3.9	-3.6	-1.9	-5.4
Foreign private credit[e]	15.1	1.2	-12.1	-22.3	-26.0	-25.3	-21.2	-27.0	-20.9	-13.3	-19.0
Short-term borrowing and domestic outflows [c]	-10.2	-23.8	-19.1	-11.7	-15.9	-2.7	-3.8	-10.1	-12.3	-7.0	23.5
Total net transfer (financial basis)	13.2	-13.9	-24.8	-27.4	-39.1	-27.8	-24.7	-35.8	-32.1	-16.5	8.4
Use of official reserves[d]	7.2	23.3	1.0	-13.2	-1.5	5.8	-3.7	4.7	-5.6	-18.7	-19.9
Total net transfer (expenditure basis)	20.4	9.4	-23.8	-40.6	-40.6	-22.1	-28.4	-31.1	-37.7	-35.2	-11.5

Source: UN/DESD, based on data of IMF and the World Bank, and United Nations Secretariat estimates.

Note: Direct investment is net of reinvested earnings (cash flow approach); official credits include use of IMF credit; interest includes IMF charges; private grants include net flow of gifts from overseas residents (excluding workers' remittances) and grants by non-governmental organizations.

a Sample of 93 countries (principal difference with data in tables IV.2 and IV.3 is omission of certain countries, mainly from Asia, for which full financial data were unavailable).

b Preliminary estimate.

c Calculated as a residual (including short-term trade financing, normal and unusual outflows ("capital flight"), arrears of interest due and other flows captured in balance-of-payments data as errors and omissions and presumed to be financial flows).

d Additions to reserves are shown as negative numbers.

e Medium- and long-term foreign borrowing.

Table A.29. Official reserves and coverage of current expenditures of capital-importing developing countries, 1981-1991

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
						Billions of dollars					
Level of reserves[b]											
All countries	111.0	100.8	109.3	127.5	139.0	157.1	207.3	209.2	228.4	277.7	330.7
Energy exporters	43.4	31.4	32.0	36.2	38.6	34.3	44.5	31.8	37.3	53.8	75.2
Energy importers	62.1	57.6	61.8	73.5	87.2	110.9	145.9	158.2	172.6	193.6	210.2
Recent surplus countries	17.5	20.0	23.6	29.0	38.5	62.8	96.0	104.0	109.4	115.7	127.8
Other	44.5	37.6	38.2	44.5	48.7	48.1	49.9	54.3	63.2	77.9	82.5
China	5.6	11.8	15.5	17.8	13.2	12.0	16.9	19.1	18.5	30.2	45.3
Memo items:											
Fifteen heavily indebted countries	41.7	26.3	27.5	39.6	40.9	34.4	38.7	33.5	38.1	57.2	74.4
Sub-Saharan Africa	3.1	2.6	2.9	3.0	4.0	5.0	5.8	6.3	6.9	8.2	9.0
Coverage of current expenditures[c]											
						Months of import cover					
All countries	2.2	1.9	2.3	2.7	2.7	2.6	2.8	2.5	2.6	3.0	3.4
Energy exporters	2.6	1.9	2.3	2.6	2.8	2.9	3.6	2.2	2.4	3.0	3.7
Energy importers	1.9	2.0	2.3	2.7	2.6	2.4	2.4	2.6	2.6	3.0	3.3
Memo items:											
Fifteen heavily indebted countries	2.3	1.6	2.1	3.0	3.2	2.8	2.9	2.2	2.3	3.1	3.8
Sub-Saharan Africa	0.9	0.9	1.0	1.1	1.4	1.6	1.7	1.7	1.9	2.1	2.3

Source: UN/DESD, based on data of IMF and national estimates.

[a] Partly estimated.

[b] Total reserves, end of period (with gold valued at SDR 35 per ounce).

[c] Expenditures on goods and services (including interest payments) for given year relative to total reserves at end of year, sample of 93 countries.

Table A.30. Net IMF lending to developing countries, by facility, 1981-1991
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Regular facilities	6.3	4.3	8.4	4.4	1.1	0.1	-3.8	-4.0	-3.0	-1.6	-1.2
Repayment terms:											
3-5 years (Credit tranche)	1.9	0.5	0.8	0.2	0.6	1.3	-0.5	-0.4	-0.2	-1.7	0.2
3.5-7 yrs (SFF/EAP)[a]	3.3	2.6	5.2	2.6	0.6	-1.0	-2.7	-2.7	-2.8	-0.7	-0.8
4-10 years (Extended Facility)	1.1	1.1	2.3	1.6	0.0	-0.2	-0.5	-0.9	0.1	0.7	-0.7
Concessional facilities	0.2	-0.2	-0.1	-0.2	-0.3	-0.5	-0.2	-0.3	0.9	0.2	1.1
In order created:											
Subsidized Oil Facility[b]	-0.3	-0.2	–	-	-	-	-	-	-	-	-
Trust Fund[c]	0.4	0.0	-0.1	-0.2	-0.3	-0.6	-0.7	-0.7	-0.5	-0.4	-0.1
SAF[d]	-	-	-	-	-	0.1	0.5	0.3	0.7	0.1	0.2
ESAF[d]	-	-	-	-	-	-	-	-	0.8	0.5	0.9
Additional facilities[e]	0.2	1.6	2.3	0.0	-0.5	-1.6	-0.7	-0.4	0.2	-0.8	1.2
In order created:											
Compensatory financing[f]	0.6	1.6	2.1	0.0	-0.4	-1.4	-0.7	-0.4	0.2	-0.8	1.2
Buffer stock[g]	–	0.1	0.3	–	-0.2	-0.2	-0.1	–	–	–	–
Oil Facility[h]	-0.4	-0.2	–	-	-	-	-	-	-	-	-
Total	6.7	5.6	10.6	4.3	0.3	-2.0	-4.7	-4.7	-1.9	-2.3	1.0
Memo items:											
Selected characteristics of higher conditionality lending agreements											
Number initiated during year	31	19	33	20	26	31	25	28	23	13	24
Average length (months)	23	14	18	14	16	22	26	25	25	19	22
Total amount committed	24.4	2.6	15.7	4.0	3.4	4.0	4.4	5.4	13.8	1.9	6.4

Source: Data of IMF, International Financial Statistics and IMF Survey.

a The Supplementary Financing Facility (1979/81) and Enhanced Access Policy (1981-present) have provided resources from funds borrowed by IMF from member States, on which the Fund pays a higher interest rate than the remuneration paid to countries that have a net creditor position with the Fund. Thus, users of SFF and EAP resources have paid a higher interest rate than on drawings from ordinary resources, which are partly subsidized. However, up to a 3 percentage point subsidy was made available for IDA-eligible countries and up to half that for countries with GDP per capita above IDA limits but under the maximum for Trust Fund eligibility, in order to reduce interest on SFF drawings towards the rate on ordinary drawings. There has been no subsidy on EAP drawings.

b See Oil Facility below; a subsidy was originally available to "most seriously affected" countries as defined by the United Nations for drawings under the 1975 Facility; it was extended to all users of the 1975 Facility that were also eligible to use the Trust Fund, as resources permitted; the subsidy was 5 per cent, reducing interest to 2.7 per cent; maturity was 7 years and repayments began in 3.5 years.

c Mainly using resources from IMF gold sales, the Trust Fund lent during 1977/81 under 1-year adjustment programmes. Eligibility was based on maximum per capita income criteria and loans had 10 year maturities, with repayments beginning in the sixth year. The interest rate was 0.5 per cent per year.

d Structural Adjustment Facility and Enhanced Structural Adjustment Facility (the first financed mainly from Trust Fund reflows and the second from loans and grants) have made loans to IDA-eligible countries with protracted balance-of-payments problems; funds are disbursed over 3 years (under Policy Framework Paper arrangements), with repayments beginning in 5.5 years and ending in 10 years; the interest rate is 0.5 per cent.

e All having final maturity of 7 years and repayments beginning in 3.5 years.

f Compensatory Financing Facility from 1963 to 1988; Compensatory and Contingency Financing Facility from August 1988.

g Helps to finance buffer stock purchases under approved international buffer stock arrangements; established June 1969.

h Two separate Oil Facilities were established with borrowed resources in 1974 and 1975; data shown here exclude subsidized arrangements for most seriously affected and other countries referred to above.

Table A.31. Funds raised on international credit markets, 1981-1991
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
World total	**200.6**	**179.1**	**157.8**	**228.8**	**279.1**	**321.4**	**303.7**	**371.9**	**385.3**	**361.4**	**417.2**
Grouped by borrower:											
Developed market economies	137.2	123.2	113.3	182.5	231.3	285.2	260.3	330.3	345.0	312.5	361.3
Eastern Europe and the USSR	1.6	0.7	1.1	3.4	5.3	3.9	3.7	4.3	4.7	4.7	1.7
Developing countries	55.1	46.7	35.8	33.1	29.3	22.2	27.8	26.8	22.7	28.9	39.5
Multilateral institutions	6.7	8.5	7.7	9.8	13.2	10.1	11.9	10.5	12.9	15.4	14.7
Grouped by instrument:											
Bonds	52.8	75.5	77.1	111.5	169.1	228.1	180.8	229.7	255.8	229.9	297.6
International bonds	31.3	50.3	50.1	81.4	136.5	187.7	140.5	178.9	212.9	180.1	248.5
Foreign and special placements	21.5	25.2	27.0	30.1	32.5	40.4	40.3	50.8	42.9	49.8	49.1
Loans	147.7	103.6	80.7	117.3	110.1	93.3	122.9	142.2	129.5	131.5	119.6
Bank loans	94.6	98.2	67.2	62.0	61.1	63.2	91.7	125.6	121.2	124.5	113.3
Other facilities	53.1	5.4	13.5	55.3	48.9	30.0	31.2	16.6	8.4	7.0	6.3

Source: OECD, *Financial Statistics Monthly*.

Table A.32. Net ODA from major sources, by type, 1981-1990
(Millions of dollars and percentages)

Donor group and country	Growth rate of ODA (1989 prices and exchange rates)		ODA as percentage of GNP	Total ODA (billions of dollars)	Percentage distribution of ODA by type, 1990					
					Bilateral			Multilateral		
	1981-1985	1986-1990	1990	1990	Grants[a]	Technical cooperation	Loans	United Nations	IDA	Other
Total ODA	1.6	-0.5	..	65.4	78.9[b]			21.1[c]		
Total DAC countries	3.6	1.3	0.36	55.4	61.4	22.4	10.7	7.2	7.6	12.9
Total EC	4.0	2.6	0.49	26.3	61.7	28.0	10.2	5.4	6.6	16.0
of which:										
France	5.6	3.9	0.79	9.4	63.3	36.6	20.1	1.5	2.9	12.2
Germany	2.6	0.8	0.41	6.2	71.4	27.8	-0.9	4.5	8.4	16.5
Italy	13.4	7.3	0.31	3.4	38.0	11.4	24.1	7.7	8.6	21.6
Netherlands	-0.5	3.5	0.92	2.6	68.6	30.2	4.5	9.7	6.8	10.5
United Kingdom	1.3	-1.8	0.27	2.6	59.4	26.9	-3.5	7.4	11.7	25.0
Denmark	7.3	4.7	0.93	1.2	60.5	9.3	-1.1	19.4	6.6	14.7
Belgium	2.4	-0.3	0.45	0.9	58.3	23.4	3.3	7.6	9.8	21.0
Ireland	8.6	-5.4	0.16	0.1	40.4	19.3	–	7.0	8.8	43.9
Australia	4.0	-4.1	0.34	0.9	78.8	24.6	–	8.0	0.2	13.0
Austria	12.1	-5.5	0.25	0.4	39.9	16.2	35.6	6.4	12.1	5.7
Canada	5.4	1.4	0.44	2.6	91.1	13.6	-22.7	10.9	9.6	11.1
Finland	15.9	13.7	0.62	0.8	52.9	12.2	5.1	24.2	4.9	12.8
Japan	2.0	6.4	0.31	9.1	33.2	14.8	41.6	5.3	11.0	8.8
New Zealand	-2.4	-2.3	0.23	0.1	85.3	36.8	–	8.4	5.3	1.1
Norway	5.9	4.9	1.17	1.2	62.7	8.1	–	22.5	6.5	8.2
Sweden	3.5	3.0	0.88	2.0	7.9	9.0	–	18.8	6.2	7.1
Switzerland	7.2	2.9	0.31	0.7	70.9	–	2.4	15.6	–	10.9
United States	0.5	0.3	0.21	11.4	74.6	23.5	-1.2	6.6	8.4	11.5
Total non-DAC OECD[d]	..	..	0.16	1.0	64.1[b]			35.9[c]		
Arab countries	..	..	..	6.3	97.5[b]			2.5[c]		
Saudi Arabia	..	..	3.89	3.7	96.4[b]			3.6[c]		
Kuwait	..	..	..	1.7	99.5[b]			0.5[c]		
United Arab Emirates	..	..	2.63	0.9	99.7[b]			0.3[c]		
Other	..	..	..	0.1	83.3[b]			16.7[c]		
Other developing countries	..	..	..	0.5	67.1[b]			32.9[c]		
China	..	..	0.05	0.2	73.3[b]			26.7[c]		
India	..	..	..	0.1	57.3[b]			42.7[c]		
Republic of Korea	..	..	0.03	0.1	42.9[b]			57.1[c]		
Taiwan Province of China	..	..	0.04	0.1	96.7[b]			3.3[c]		
Venezuela	..	..	0.09	–	65.9[b]			34.1[c]		
Eastern Europe and the Soviet Union	..	..	..	2.2	98.6[b]			1.5[c]		

Source: UNCTAD calculations, based on OECD, DevelopmentCo-operation, various issues.

[a] Including technical cooperation.
[b] Total bilateral: grants, technical cooperation and loans.
[c] Total multilateral: United Nations, IDA and "other".
[d] Greece, Iceland, Luxembourg, Portugal and Spain.

Table A.33. Regional distribution of ODA from major sources, 1980-1990
(Billions of dollars and percentage)

Donor and donor group	All developing countries 1980-1981	All developing countries 1989-1990	Latin America 1980-1981	Latin America 1989-1990	Africa 1980-1981	Africa 1989-1990	West Asia 1980-1981	West Asia 1989-1990	South and East Asia 1980-1981	South and East Asia 1989-1990	Mediterranean 1980-1981	Mediterranean 1989 1990
Total ODA (billions of dollars)	65.5	98.9	7.6	12.0	22.1	43.5	22.2	28.6	10.4	7.8	1.8	1.6
Percentage share of:												
DAC countries, bilateral	49.7	64.6	57.1	82.5	62.0	66.5	49.1	70.5	22.9	51.7	71.1	57.3
Australia	1.5	1.4	–	–	0.3	0.4	4.1	4.2	–	0.1	–	--
Austria	0.6	0.5	0.2	0.2	0.5	0.3	0.6	0.8	0.6	0.5	3.4	4.3
Belgium	1.2	0.7	0.5	0.5	2.6	1.2	0.6	0.2	0.1	–	0.9	0.4
Canada	1.6	2.1	1.8	3.1	2.3	2.3	1.9	2.3	–	0.5	1.1	--
Denmark	0.6	1.0	0.1	0.3	1.1	1.4	0.7	0.9	0.1	0.3	–	--
Finland	0.2	0.8	0.1	0.5	0.4	1.2	0.2	0.6	–	0.2	0.1	0.4
France	10.1	13.2	21.3	21.7	17.4	18.4	4.6	7.7	0.8	2.1	3.2	7.1
Germany	6.3	6.6	8.1	8.1	7.0	6.7	4.6	5.9	2.7	6.8	35.0	24.9
Ireland	–	–	–	–	0.1	0.1	–	–	–	–	–	--
Italy	0.3	3.8	0.3	6.5	0.7	5.7	–	1.3	0.1	0.8	1.5	2.6
Japan	6.3	12.7	3.9	9.4	3.1	5.2	13.6	29.9	0.8	3.1	2.8	25.4
Netherlands	3.3	3.0	7.5	5.2	3.4	2.8	3.4	3.5	0.4	1.1	0.3	0.2
New Zealand	0.1	0.1	–	–	–	–	0.4	0.4	–	–	–	--
Norway	0.7	1.1	0.2	1.0	1.3	1.7	0.8	0.8	–	–	0.6	0.1
Sweden	1.7	2.1	0.7	2.0	2.9	2.9	2.0	2.1	–	0.5	0.7	--
Switzerland	0.4	0.8	0.5	1.0	0.6	1.0	0.4	0.8	0.1	0.4	0.6	0.3
United Kingdom	3.4	2.3	1.7	1.6	4.2	2.9	4.7	2.9	0.4	0.6	3.8	-0.8
United States	11.3	12.4	10.1	21.4	14.3	12.4	6.4	6.2	16.8	34.7	17.0	-7.5
DAC countries, multilateral	21.6	23.3	23.4	17.5	23.6	26.5	28.7	29.7	6.7	11.3	6.2	2.5
Arab countries, bilateral	17.1	6.4	0.2	–	12.8	6.8	3.7	-0.1	69.0	36.2	21.7	40.1
Arab countries, multilateral	1.0	0.1	0.6	–	1.6	0.2	0.4	-0.1	1.4	0.8	1.1	--
Eastern Europe and the Soviet Union	10.6	5.5	18.8	–	–	–	18.1	–	–	–	–	--
Total ODA	100	100	100	100	100	100	100	100	100	100	100	100

Source: UNCTAD calculations, based on data supplied by OECD.

Table A.34. Resource commitments of multilateral development institutions, 1981-1991[a]
(Millions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Financial institutions	18 668	18 339	22 036	20 300	23 809	24 960	26 640	27 655	32 518	34 862	39 840
African Development Bank	636	766	899	897	1 154	1 640	2 140	2 176	3 000	3 300	3 288
Asian Development Bank	1 694	1 702	1 922	2 257	1 845	2 044	2 508	3 241	3 709	4 067	5 117
Caribbean Development Bank	42	45	48	65	50	67	41	74	73	124	112
Inter-American Development Bank	2 534	2 793	3 099	3 615	3 102	3 057	2 408	1 738	2 694	4 005	5 661
of which:											
Inter-American Investment Corporation									15	67	102
International Fund for Agricultural Development	377	338	282	211	131	147	233	244	277	323	281
World Bank Group:	13 385	12 695	15 786	13 255	17 527	18 005	19 310	20 182	22 765	23 043	25 381
International Bank for Reconstruction and Development	8 905	9 398	11 721	9 448	12 952	13 593	14 066	14 411	16 251	15 176	17 021
International Development Association	3 688	2 832	3 112	3 222	3 541	3 373	3 841	4 350	4 924	6 300	7 160
International Finance Corporation	792	465	953	585	1 034	1 039	1 403	1 421	1 590	1 567	1 200
Operational agencies of the United Nations	1 839	1 947	1 722	2 028	2 032	1 933	2 242	2 763	2 851	3 012	3 978
United Nations Development Programme[b]	696	621	527	531	567	656	809	942	1 063	1 111	1 159
United Nations Population Fund	127	115	117	134	141	116	134	169	194	211	212
United Nations Children's Fund	295	405	182	204	452	248	330	454	498	545	947
World Food Programme	721	806	896	1 159	872	913	969	1 198	1 096	1 145	1 660
Total commitments	20 507	20 286	23 758	22 328	25 841	26 893	28 882	30 418	35 369	37 874	43 818
Memo item:											
Commitments in units of 1980 purchasing power[c]	21 816	22 050	26 694	25 963	30 048	26 110	24 898	24 531	28 755	27 849	32 219

Source: Annual reports and information supplied by individual institutions.

[a] Loans, grants, technical assistance and equity participation, as appropriate; all data are on a calendar-year basis.
[b] Including UNDP-administered funds.
[c] Total commitments deflated by the United Nations index of manufactured export prices in dollars of developed market economies, 1980 = 100.

Table A.35. External debt of capital-importing developing countries, 1981-1991
(Billions of dollars)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
						All countries[b]					
Long-term debt	548.5	621.4	721.3	753.5	839.6	944.9	1 067.2	1 050.4	1 049.9	1 056.1	1 060.9
Concessional	150.2	161.7	176.2	169.6	193.7	222.4	266.9	276.7	290.3	279.6	..
Bilateral	122.2	130.5	141.9	132.4	151.2	174.0	209.9	216.4	224.1	204.3	..
Multilateral[c]	28.0	31.2	34.3	37.2	42.6	48.5	57.1	60.3	66.2	75.3	..
Official, non-concessional	92.2	110.6	135.6	147.6	180.1	218.9	263.8	252.5	257.7	279.6	..
Bilateral	45.8	51.8	61.0	69.2	80.1	94.8	114.0	110.7	115.3	117.9	..
Multilateral	32.1	39.1	45.6	47.4	64.6	86.3	111.4	109.5	113.9	131.5	..
IMF	14.3	19.7	29.1	31.0	35.4	37.8	38.4	32.2	28.5	30.2	30.3
Private	306.1	349.0	409.5	436.3	465.7	503.6	536.5	521.2	501.9	496.8	487.5
Short-term debt	148.9	164.4	138.3	131.1	130.8	125.6	144.3	150.8	165.4	194.4	198.9
Total external debt	**697.4**	**785.8**	**859.6**	**884.6**	**970.4**	**1 070.5**	**1 211.2**	**1 201.2**	**1 215.4**	**1 250.5**	**1 259.9**
						Africa					
Long-term debt	108.8	121.9	132.5	136.6	159.6	187.2	227.6	230.9	237.6	248.2	245.4
Concessional	39.0	42.4	44.9	45.0	52.3	60.3	72.3	75.4	80.9	90.0	..
Bilateral	29.7	31.9	33.2	33.5	37.8	43.2	51.0	52.5	55.0	60.8	..
Multilateral[c]	9.3	10.5	11.7	12.5	14.4	17.1	21.4	23.0	25.9	29.2	..
Official, non-concessional	25.0	30.0	36.7	40.5	50.2	64.3	81.6	80.6	84.7	84.9	..
Bilateral	15.2	18.3	22.7	26.1	31.8	41.5	53.3	53.6	57.6	55.6	..
Multilateral	5.8	6.7	7.8	8.0	11.1	15.2	20.1	19.6	20.5	23.2	..
IMF	3.9	5.0	6.1	6.4	7.3	7.6	8.2	7.4	6.6	6.1	5.7
Private	44.8	49.5	50.8	50.1	57.1	62.6	73.7	74.8	71.9	73.2	67.7
Short-term debt	18.1	19.2	20.4	22.6	24.1	25.6	23.7	25.0	28.4	29.5	29.3
Total external debt	**126.9**	**141.1**	**152.8**	**159.2**	**183.6**	**212.**	**251.3**	**255.8**	**266.0**	**277.7**	**274.7**
						Asia					
Long-term debt	165.6	190.3	214.8	219.6	253.7	292.5	331.5	333.3	339.9	347.2	360.7
Concessional	70.2	75.1	82.1	78.2	90.0	103.5	126.6	132.2	138.2	130.7	..
Bilateral	56.3	59.4	64.7	59.1	68.0	79.0	98.6	102.7	106.3	93.6	..
Multilateral[c]	13.9	15.7	17.4	19.1	22.0	24.5	28.0	29.5	31.9	37.1	..
Official, non-concessional	29.7	36.3	42.7	44.2	50.4	57.7	62.7	55.1	54.4	61.0	..
Bilateral	13.9	15.9	17.7	19.6	20.6	21.8	21.2	15.9	14.0	14.3	..
Multilateral	9.6	11.9	14.6	14.9	19.7	25.3	32.1	32.4	34.9	41.3	..
IMF	6.2	8.5	10.4	9.7	10.1	10.6	9.4	6.8	5.5	5.4	5.7
Private	65.6	78.9	90.0	97.2	113.3	131.3	142.2	146.0	147.3	155.5	158.1
Short-term debt	38.6	47.1	49.4	50.3	51.7	51.9	61.8	63.4	65.0	75.9	79.4
Total external debt	**204.2**	**237.5**	**264.2**	**269.9**	**305.4**	**344.4**	**393.3**	**396.7**	**404.9**	**423.1**	**440.1**

Table A.35 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
					Sub-Saharan Africa						
Long-term debt	45.8	50.1	55.0	58.2	69.9	82.6	100.0	101.0	105.4	118.7	121.2
Concessional	17.6	19.1	21.2	23.2	27.5	33.1	41.6	43.8	48.3	57.7	..
Bilateral	11.4	12.5	13.2	14.4	17.1	20.2	24.8	25.3	27.0	31.9	..
Multilateral[c]	6.2	6.6	8.0	8.8	10.4	12.9	16.8	18.5	21.2	25.8	..
Official, non-concessional	12.6	14.2	17.8	18.7	23.1	28.1	34.5	33.6	33.3	36.3	..
Bilateral	6.2	6.7	8.7	9.3	11.6	14.8	18.9	19.0	20.0	22.3	..
Multilateral	3.0	3.5	4.0	4.1	5.5	6.9	9.0	8.6	8.6	9.6	..
IMF	3.4	4.0	5.1	5.3	6.0	6.4	6.6	6.0	4.7	4.4	3.5
Private	15.6	16.8	16.0	16.3	19.3	21.4	23.9	23.6	23.8	24.7	22.7
Short-term debt	6.4	6.7	6.3	7.5	9.3	9.9	12.6	13.4	16.6	18.9	18.8
Total external debt	**52.2**	**56.8**	**61.3**	**65.6**	**79.2**	**92.5**	**112.6**	**114.4**	**122.0**	**137.6**	**140.0**
					Latin America						
Long-term debt	231.7	263.9	324.0	347.3	367.4	398.5	429.7	407.0	391.0	377.3	372.2
Concessional	30.4	32.2	35.1	31.8	35.1	39.5	44.6	45.4	46.5	33.9	..
Bilateral	26.6	28.2	30.8	27.2	30.1	34.1	38.8	39.5	40.4	27.3	..
Multilateral[c]	3.8	4.0	4.3	4.6	5.0	5.4	5.7	5.8	6.2	6.6	..
Official, non-concessional	25.4	31.0	42.1	48.8	62.7	77.1	96.8	96.3	98.7	112.9	..
Bilateral	11.2	12.3	15.6	18.3	22.1	25.2	32.8	34.9	37.0	41.3	..
Multilateral	12.7	15.7	17.7	19.0	26.1	35.6	45.8	45.0	46.1	53.6	..
IMF	1.5	2.9	8.8	11.5	14.5	16.3	18.1	16.3	15.6	18.1	17.1
Private	175.9	200.7	246.9	266.7	269.6	282.0	288.4	265.3	245.8	230.5	223.7
Short-term debt	85.5	92.1	62.5	51.2	45.8	36.8	45.2	50.5	61.0	70.4	72.2
Total external debt	**317.2**	**356.1**	**386.5**	**398.5**	**413.2**	**435.3**	**475.0**	**457.5**	**452.1**	**447.7**	**444.9**
					Fifteen heavily indebted countries						
Long-term debt	246.0	280.7	341.4	367.0	393.5	433.8	475.8	451.3	436.3	441.9	439.7
Concessional	15.8	16.2	16.2	16.0	18.9	23.1	25.3	25.3	25.6	29.2	..
Bilateral	12.8	13.2	13.1	12.8	15.5	19.4	21.4	21.5	21.7	24.7	..
Multilateral[c]	2.9	3.0	3.1	3.2	3.4	3.7	3.9	3.8	3.9	4.5	..
Official, non-concessional	29.1	35.2	47.4	55.3	71.4	94.3	120.5	118.7	126.0	145.2	..
Bilateral	10.4	11.0	14.5	18.8	23.1	32.7	44.2	46.5	53.1	60.8	..
Multilateral	15.3	18.7	21.4	22.6	30.9	42.4	55.2	53.6	55.6	65.0	..
IMF	3.5	5.5	11.5	13.9	17.4	19.3	21.0	18.6	17.4	19.4	18.0
Private	201.1	229.2	277.8	295.7	303.2	316.4	330.0	307.3	285.8	267.4	268.4
Short-term debt	99.7	105.4	75.0	64.4	57.0	41.3	45.9	50.2	60.2	71.8	65.0
Total external debt	**345.7**	**386.1**	**416.4**	**431.4**	**450.5**	**475.5**	**521.7**	**501.5**	**496.5**	**513.7**	**504.7**

Source: UN/DESD, based on data of IMF, OECD and the World Bank.

a Estimate.

b Debt of 122 economies, drawn primarily from the data of the Debtor Reporting System of the World Bank (107 countries). For non-reporting countries, data are drawn from the Creditor Reporting System of OECD (15 economies), excluding, however, non-guaranteed bank debt of offshore financial centres, much of which is not the debt of the local economies.

c Including concessional facilities of IMF.

Table A.36. Debt indicators and debt-service payments for capital-importing developing countries, 1981-1991

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
						Debt indicators (percentage)					
Ratio of external debt to GNP											
All countries	30.8	35.9	40.7	41.3	44.6	48.2	50.1	43.9	40.1	38.6	36.0
of which:											
Africa	44.4	48.2	52.5	53.3	59.9	74.9	92.4	96.1	99.8	98.2	99.6
Asia	21.3	24.4	27.6	26.1	29.2	30.6	32.1	27.5	25.3	26.1	26.5
Latin America	37.3	50.2	62.6	59.1	60.9	62.9	64.0	53.9	47.4	40.7	37.3
Memo items:											
Fifteen heavily indebted countries	35.6	43.6	55.5	55.8	57.9	61.6	65.4	55.4	48.6	42.6	43.1
Sub-Saharan Africa	53.2	59.5	64.2	66.3	76.4	80.7	93.3	94.6	99.9	109.5	104.7
Ratio of external debt to exports											
All countries	132.1	156.4	171.6	161.9	180.9	199.8	186.3	157.4	142.1	133.8	132.6
of which:											
Africa	146.2	180.0	197.5	194.3	224.0	303.1	325.3	320.1	308.2	263.1	260.3
Asia	121.3	144.6	155.2	145.8	172.9	182.6	169.1	143.6	133.0	128.2	124.4
Latin America	233.1	289.8	328.5	305.8	331.7	399.3	388.8	333.1	290.5	266.7	280.6
Memo items:											
Fifteen heavily indebted countries	200.3	251.5	287.3	271.2	289.2	343.0	334.7	285.5	248.7	223.9	230.6
Sub-Saharan Africa	190.7	222.7	247.3	226.8	275.8	314.6	350.9	345.6	344.6	363.5	376.1
Ratio of debt-service to exports											
All countries	21.3	24.0	22.9	22.4	23.8	24.6	22.0	20.2	16.9	15.2	15.8
of which:											
Africa	18.7	21.8	24.0	25.6	26.4	30.0	24.9	28.4	27.3	24.0	25.6
Asia	11.6	12.9	13.3	12.9	16.1	15.8	15.5	12.1	10.5	10.0	9.3
Latin America	40.4	47.7	42.3	39.3	37.6	43.3	37.5	39.5	29.2	25.2	29.4
Memo items:											
Fifteen heavily indebted countries	37.1	44.9	40.8	39.2	37.0	40.8	34.8	36.4	27.7	22.6	25.3
Sub-Saharan Africa	19.9	20.8	22.4	20.6	23.7	27.4	24.0	24.0	21.1	18.6	19.0

Table A.36 *(continued)*

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
					Debt-service payments (billions of dollars)						
All countries											
Total debt service	106.9	115.0	108.9	117.5	122.9	127.1	137.1	147.3	137.9	139.5	147.6
Interest payments	60.3	67.5	64.3	68.5	68.2	63.7	63.2	73.1	66.4	63.8	71.3
of which: non-concessional	57.8	65.6	62.5	66.7	65.9	61.0	60.0	70.2	58.0	55.0	..
By region:											
Africa											
Total debt service	15.6	16.4	17.5	19.8	21.6	21.0	19.2	22.7	23.5	25.4	27.4
Interest payments	7.9	7.9	8.0	9.0	8.8	8.5	7.4	9.8	9.8	9.7	11.0
of which: non-concessional	7.3	7.5	7.5	8.5	8.2	7.8	6.8	9.0	8.9	8.9	..
Asia											
Total debt service	27.7	30.5	32.2	35.1	43.2	47.1	58.8	55.5	54.7	56.8	58.3
Interest payments	15.4	17.5	17.0	18.7	19.7	19.8	21.6	23.4	24.7	25.0	27.2
of which: non-concessional	11.0	14.8	14.5	16.3	16.7	16.4	17.6	19.5	20.8	20.6	..
Latin America											
Total debt service	56.3	59.8	51.0	52.5	48.6	48.6	47.0	55.2	45.9	42.5	48.1
Interest payments	33.2	37.9	35.1	35.6	35.2	30.4	28.8	33.8	26.1	22.7	26.7
of which: non-concessional	32.9	37.7	34.9	35.3	34.9	30.1	28.4	33.4	25.9	22.0	..
Memo items:											
Fifteen heavily indebted countries											
Total debt service	64.0	68.9	59.1	62.4	57.7	56.6	54.3	63.9	55.2	51.7	55.3
Interest payments	38.0	43.1	39.6	41.6	39.8	34.3	32.5	38.9	31.4	27.6	31.0
of which: non-concessional	37.6	42.8	39.2	41.3	39.5	34.0	32.2	38.5	31.1	27.1	..
Sub-Saharan Africa											
Total debt service	5.4	5.3	5.5	5.9	6.8	8.1	7.7	7.9	7.5	7.1	6.6
Interest payments	2.7	2.8	2.6	2.8	3.0	3.4	3.0	3.2	3.0	2.9	2.9
of which: non-concessional	2.5	2.5	1.6	2.7	2.8	3.0	2.6	2.8	2.6	2.5	..

Source: UN/DESD, based on data of IMF, OECD and the World Bank.

a Preliminary estimate.

Table A.37. Debt restructuring with official creditors, 1982-1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of agreements	5	15	14	22	19	17	15	24	17	14
Developing countries, total										
Middle-income countries	-	4	2	9	3	4	3	5	1	2
Lower-middle-income countries	-	3	5	4	6	5	3	5	6	8
Low-income countries	5	8	7	9	10	7	8	12	9	3
Sub-Saharan Africa	5	9	9	10	15	9	9	16	9	6
Amounts rescheduled[a] (millions of dollars)										
Developing countries, total	428	8 644	3 764	6 457	12 183	19 969	9 362	18 600	6 075	43 708[b]
Middle-income countries	-	4 172	704	3 789	2 201	6 670	6 721	6 016	200	1 825
Lower-middle-income countries	-	1 635	1 939	1 692	7 502	10 962	1 342	9 312	3 320	41 063[b]
Low-income countries	428	2 837	1 121	976	2 480	1 987	973	2 518	2 445	330[b]
Sub-Saharan Africa	428	2 854	1 494	1 192	9 466	2 904	1 299	10 330	3 374	1 920[b]
Average consolidation period (years)										
Developing countries, total	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.4[c]	1.5	..[d]
Middle-income countries	-	1.1	1.0	1.1	1.2	1.1	1.4	1.6	1.4	0.8
Lower-middle-income countries	-	1.1	1.2	1.2	1.2	1.4	1.4	1.4	1.4	..[d]
Low-income countries	1.1	1.0	1.1	1.3	1.2	1.2	1.2	1.3[c]	1.7	1.2
Sub-Saharan Africa	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.3[c]	1.6	1.2
Average maturity on consolidated debt (years)										
Developing countries, total	8.8	8.7	10.7	9.9	10.3	13.1	16.1	13.7	15.3	..[d]
Middle-income countries	-	..	8.8	9.1	9.9	8.1	9.4	9.4	9.3	9.8
Lower-middle-income countries	-	..	10.0	10.1	10.1	10.4	9.0	10.1	14.0	..[d]
Low-income countries	8.8	..	11.8	10.6	10.5	17.6	22.0	17.6	17.4	17.4
Sub-Saharan Africa	8.8	9.8	11.4	10.5	10.3	15.9	20.7	15.2	17.1	15.2

Sources: UNCTAD, based on Paris Club Agreed Minutes.

Notes: In 1988, Paris Club creditors adopted new concessional debt relief measures for low-income countries, which are known as the Toronto measures.

Lower-middle-income countries: this group of countries will likely be the main beneficiaries of the Houston terms although a small number of them have benefited from the Toronto terms.

a Including previously rescheduled debt.
b Preliminary.
c Excluding Equatorial Guinea.
d Owing to the menu options for Egypt, it is not possible to calculate consolidation periods and maturity averages for 1991.

Table A.38. Debt-restructuring agreements with commercial banks: all developing countries, 1983-1991

	1983	1984	1985	1986	1987	1988	1989	1990	1991[a]
Number of agreements	27	26	14	12	19	10	4	6	2
Amounts rescheduled (billions of dollars)[b]	47.6	91.3	23.2	72.7	89.7	79.7	6.8	11.9	1.6
Average consolidation period (years)	1.5	2.8	2.8	2.8	4.0	6.5	3.3	3.9	..
Average repayment terms:									
Maturity (years)	6	9	11	10	15	19	16	13	..
Grace (years)	3	3	4	4	5	7	5	4	..
Spread over LIBOR (percentage)	2.0	1.8	1.5	1.3	1.0	0.8	0.9	0.8	..

Sources: World Bank Debtor Reporting System and IMF.

a At the time of writing, creditors had not completed making their choices from the options available under Nigeria's agreement for debt and debt service reduction (the other agreement was for Uruguay). Thus, very little data can be reported for the year.

b Including previously rescheduled debt.

IV. THE INTERNATIONAL OIL MARKET

Table A.39. Value of oil exports of OPEC member countries, 1970-1991[a]
(Millions of dollars)

Country	1970	1980	1985	1986	1987	1988	1989	1990	1991[b]
Algeria	681	12 647	9 170	4 819	6 057	4 988	7 000	8 854	7 162
Ecuador	1	1 551	1 926	983	724	976	1 147	1 258	1 200
Gabon	62	1 745	1 629	723	896	779	1 200	1 967	1 953
Indonesia	446	15 595	9 083	5 501	6 157	5 189	6 059	8 700	5 313
Iran (Islamic Republic of)	2 358	13 286	13 115	7 183	10 515	8 170	12 500	17 300	16 750
Iraq	788	26 296	10 686	6 905	11 416	10 952	14 500	9 463	–
Kuwait	1 596	17 678	9 817	6 378	7 520	5 584	9 306	5 536	789
Libyan Arab Jamahiriya	2 356	21 378	9 962	5 438	5 432	5 169	7 500	9 700	9 471
Nigeria	716	25 290	12 353	6 010	7 161	6 267	7 500	13 200	10 573
Qatar	227	5 406	3 068	1 720	1 829	1 536	1 955	2 800	2 556
Saudi Arabia	2 418	105 813	24 180	16 975	19 271	19 607	24 093	39 700	50 000
United Arab Emirates	523	19 558	11 842	7 453	8 665	7 352	11 500	15 000	15 528
Venezuela	2 371	18 248	10 352	6 653	6 959	8 162	10 020	13 958	13 247
Total	**14 542**	**284 491**	**127 180**	**76 739**	**92 601**	**84 731**	**114 280**	**147 436**	**134 542**

Source: UN/DESD, based on *OPEC Annual Statistical Bulletin*.

a Where appropriate, petroleum product exports are included. Data for some countries may include exports of condensate. Starting in 1980, Saudi Arabia data exclude natural gas liquids.

b Estimate.

Table A.40. World oil demand, 1986-1992[a]
(Millions of barrels per day)

	1986	1987	1988	1989	1990	1991	1992[b]	change in quantity 1986 and 1991	percentage change 1986 and 1991
Developed market economies	35.4	36.0	37.5	37.8	38.0	37.9	38.3	2.5	7.1
North America	18.0	18.5	19.2	19.3	18.9	18.5	18.9	0.5	2.8
Western Europe	12.2	12.3	12.8	12.8	13.0	13.2	13.3	1.0	8.2
Pacific	5.2	5.2	5.5	5.8	6.0	6.1	6.2	0.9	17.3
Eastern Europe and the USSR	11.0	11.1	10.8	10.7	10.1	9.7	9.0	-1.3	-11.8
Eastern Europe	2.0	2.1	1.9	1.9	1.7	1.4	1.3	-0.6	-30.0
USSR[c]	9.0	9.0	8.9	8.8	8.4	8.3	7.7	-0.7	-7.8
Developing countries	15.2	15.8	16.6	17.5	18.1	18.7	19.5	3.5	23.0
Africa	1.8	1.9	2.0	2.1	2.1	2.2	2.2	0.4	22.2
Middle East	2.9	3.0	3.0	3.1	3.3	3.3	3.4	0.4	13.8
Asia	3.8	4.0	4.5	4.9	5.3	5.6	6.0	1.8	47.4
Latin America	4.7	4.8	4.9	5.0	5.1	5.2	5.4	0.5	10.6
China[c]	2.0	2.1	2.2	2.4	2.3	2.4	2.5	0.4	20.0
Total world[d]	**61.6**	**62.9**	**64.9**	**66.0**	**66.2**	**66.3**	**66.8**	**4.7**	**7.6**

Source: UN/DESD, based on International Energy Agency, *Monthly Oil Market Report*, April 1991 and January 1992.

[a] Including deliveries from refineries/primary stocks, marine bunkers, refinery fuel and non-conventional oils.
[b] Estimate.
[c] Based on estimates of apparent domestic demand derived from official production figures and quarterly trade data.
[d] Totals may not add up because of rounding.

Table A.41. World crude oil production, 1970-1991
(Millions of barrels per day)

	1970	1980	1985	1986	1987	1988	1989	1990	1991	change in volume 1985 and 1991	percentage change 1985 and 1991
Developed market economies	11.24	12.60	14.36	14.25	14.20	14.12	13.50	13.27	13.63	-0.73	-5.1
Eastern Europe and the USSR	7.42	12.40	12.24	12.62	12.79	12.81	12.54	11.74	10.52	-1.72	-14.1
Developing countries	26.84	34.58	26.60	29.12	28.76	31.47	33.35	35.3	35.77	9.17	34.5
OPEC member countries	23.31	26.80	16.08	18.39	17.59	20.02	21.71	23.22	23.35	7.27	45.2
Other oil-exporting countries	2.66	6.68	8.59	8.77	9.25	9.51	9.70	9.99	10.26	1.67	19.4
Oil-importing countries	0.87	1.10	1.93	1.96	1.92	1.94	1.94	2.09	2.16	0.23	11.9
World total	45.50	59.58	53.20	55.99	55.75	58.4	59.39	60.31	59.92	6.72	12.6

Source: UN/DESD, based on *Energy Statistics Yearbook*, various issues, and *Oil and Gas Journal*, 25 December 1989 and 31 December 1990.

Table A.42. OPEC crude oil production, 1991
(Thousands of barrels per day)

Country	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Algeria	800	800	800	800	800	800	800	800	800	800	800	800
Ecuador	290	290	290	290	280	280	280	290	290	290	300	300
Gabon	300	300	300	300	300	300	300	300	300	300	300	300
Indonesia	1 450	1 450	1 450	1 500	1 450	1 450	1 450	1 450	1 400	1 400	1 400	1 400
Iran (Islamic Republic of)	2 960	3 470	3 300	3 276	3 214	3 250	3 250	3 200	3 200	3 260	3 080	3 400
Iraq	300	–	–	200	300	300	300	300	400	400	420	420
Kuwait[a]	100	–	–	–	–	70	155	235	320	420	480	510
Libyan Arab Jamahiriya	1 550	1 530	1 470	1 450	1 500	1 550	1 500	1 500	1 530	1 500	1 550	1 550
Nigeria	1 900	1 900	1 900	1 850	1 850	1 850	1 880	1 870	1 850	1 800	1 920	1 950
Qatar	350	380	390	380	400	400	400	400	400	400	400	400
Saudi Arabia[a]	8 350	8 400	8 400	7 500	7 500	8 250	8 385	8 475	8 500	8 500	8 480	8 500
United Arab Emirates	2 400	2 400	2 500	2 500	2 300	2 300	2 300	2 300	2 300	2 330	2 430	2 470
Venezuela	2 350	2 350	2 350	2 300	2 300	2 300	2 300	2 350	2 300	2 350	2 350	2 350
Total	23 100	23 270	23 150	22 346	22 194	23 100	23 300	23 470	23 620	23 850	23 950	24 300

Source: UN/DESD, based on *Middle East Economic Survey*, 13 January 1992.

[a] Including share of Neutral Zone.